

CITY AND COUNTY OF SAN FRANCISCO  
DEPARTMENT OF CITY PLANNING

**DRAFT**  
**Environmental Impact Report**

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Office Building**

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**ENVIRONMENTAL IMPACT REPORT**

**1145 MARKET STREET OFFICE BUILDING**

**81.549E**

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## SUMMARY

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### A. PROJECT DESCRIPTION

The proposed project is an office and retail building which would be located on the south side of Market Street between Seventh and Eighth Streets on Assessor's Block 3702, Lots 44-44A in the Civic Center area. The project site measures 88 feet along the Market Street frontage and is 165 feet deep containing a total of 14,520 square feet. The project site is in a C-3-G (Downtown General Commercial) zoning district. A maximum Floor Area Ratio (FAR) of 10 to 1 is permitted in this district by Section 124 of the Planning Code. On the project site, the maximum permitted gross floor area is 145,200 square feet.

The proposed structure would contain 13 floors and have a basement for utilities and mechanical equipment. Total gross square footage contained within the structure would be approximately 145,200 square feet. Approximately 137,200 gross square feet would contain office use on Floors 2 through 13. The ground floor would contain about 8,000 gross square feet of retail space. Office use of the project with ground-floor retail use would be consistent with C-3-G zoning and would be similar to existing and approved adjacent land uses. The proposed project would not require any exceptions to the City Planning Code. The project would be subject to discretionary review by the City Planning Commission.

The ground-floor retail space, building lobby and elevators would be accessible via a central pedestrian passageway extending from the Market Street side of the building through to Stevenson Street, which abuts the south side of the structure. The building would be set back 45 feet from Market Street at the 85-foot height level and floors above that level would be progressively stepped back. The structure would contain light-grey concrete exterior building walls with clear glass windows below the 85-foot level. The levels stepped inward from Market Street above the 85-foot level would contain clear glass panes set into a grid pattern of white, enameled frames. The objective of the project architects is to design a light-colored building which visually relates to the scale, bulk and proportions of buildings in the project area.

The proposed project would require demolition of the four-story, 43,560-square-foot Civic Center Market building on the project site that is vacant. Estimated project construction costs are about \$10,000,000. Construction would be expected to begin in early 1984 and initial occupancies could take place in mid-1985.

## **B. ENVIRONMENTAL IMPACTS**

An Initial Study and Preliminary Negative Declaration for the proposed project was published by the Department of City Planning on May 21, 1982. Upon appeal of the Preliminary Negative Declaration, the City Planning Commission found that an EIR was required to assess the growth including impacts, and cumulative transportation impacts of the proposed project (Resolution 9499). The Department then prepared a "Notice that an Environmental Impact Report is Determined to be Required" which accompanies the Initial Study included as Appendix A of this report. Based upon the Commission Resolution, Initial Study and above "Notice," it was determined that the project would have no significant effect in the following areas: land use compatibility; visual quality and urban design; employment, housing and fiscal impacts; project-generated transportation impacts; noise; climate; utilities and public services; biology; land; water; energy; hazards; and cultural impacts. Impacts covered in this report are summarized below.

### **I. Transportation**

The proposed project would generate about 3,040 daily person trips, approximately 490 of which would occur during the p.m. peak-hour. The project would contribute about 1.0% of the cumulative peak-hour trip generation of the cumulative office projects (page 30). The project would generate about 105 peak-hour auto trips. The addition of project traffic would not change intersection service levels in the site area (see page 32). The proposed project would increase the projected peak-hour load for the twenty-five Muni lines within 2,000 feet of the project by approximately one percent (see page 33). The project would generate a parking demand for about 150 parking spaces. The parking demand generated by the project would increase surrounding parking occupancy from about 92% to 95%.

Transportation impacts would be generated by the cumulative development (including the project) of 17.3 million gross square feet of office space in the downtown and South of Market (SOMA) areas. This development would generate about 48,000 p.m. peak-hour person-trips. Based upon current travel patterns these trips would include about 17,900



trips by auto, 12,770 on Muni, 6,805 on BART, 3,680 on A.C. Transit, 2,015 each on Southern Pacific and Golden Gate Transit and 755 on Samtrans. With these increases, each of the various travel modes would experience travel demand in excess of existing capacity. With the exception of Samtrans and Golden Gate Transit, the transit carriers have plans for expanded capacity commensurate with demand. On the regional highway network, traffic flows would be jammed during most of the 3-7 p.m. period. This congestion would cause backups through freeway ramps onto city streets. No major street or highway improvements are anticipated.

The EIR analysis has assumed existing travel modes would continue. Traffic congestion and parking limitations would probably result in increased transit usage and higher auto occupancy. These factors would cause changes in overall travel modes and these changes cannot be specifically projected. This modal shift would be particularly sensitive to the lack of parking for further downtown and SOMA development.

Without the project, the cumulative effect of other development would be a degradation from unimpeded to impeded pedestrian flows on the Market Street sidewalk adjacent to the project site during the peak hours.

## 2. Air Quality

No violations of the federal 8-hour curbside CO standard of nine parts per million (ppm) or state one-hour curbside CO standard of 20 parts per million (ppm) are predicted to occur under existing conditions in 1988 with or without the project. Neither the proposed project nor cumulative development in the project vicinity would conflict with the control strategies contained in the Bay Area Air Quality Plan.

## 3. Growth Inducement

The project would represent an additional 0.6% of cumulative office space growth in downtown San Francisco. To the extent that the project would attract new residents or commuters who otherwise would not have been attracted to San Francisco or the Bay Area, the project may be viewed as employment-generating and growth-inducing. Employee purchasing power could stimulate employee-oriented retail activity in the proposed project area. The project, together with other office development, could stimulate additional office growth in the vicinity on lots currently containing lower intensity land uses.



## C. MITIGATION MEASURES

Main mitigation measures proposed as part of the project that respond to EIR impact analysis are included below. Other mitigation measures responding to issues outside the scope of this EIR were included in the Initial Study, shown as Appendix A, page A-1. These additional measures remain as part of the proposed project and are incorporated in full in Chapter IV., Mitigation, page 42.

### 1. Transportation

The project would be subject to the transit development fee imposed under Ordinance No. 224-81 if that fee is sustained by the Board of Supervisors. The project sponsor would encourage transit use by employees by convenient on-site sales of BART, Golden Gate Transit and Muni commute books and passes, and promoting employee carpool/vanpool systems.

The project sponsor would request tenant firms to implement a flexible time system for employee working hours.

The project sponsor would participate in any future area-wide study of current parking conditions and future needs.

### 2. Air Quality

The project sponsor would require the contractor to implement a twice-daily watering program to reduce the likelihood of airborne construction dust.

## D. ALTERNATIVES

Alternatives to the proposed project include the No-Project Alternative wherein none of the project's impacts would occur and the vacated building on the site would remain; the Reduced Building Height Alternative which would create a bulkier building, but reduce impacts on public services, transportation systems, air quality, housing and energy consumption proportional to the reduction of gross floor area; the On-site Housing Alternative which provides on-site housing under a scenario of reduced office space to remain within the 10:1 FAR, thereby reducing the number of office employees and required housing units; and the Guiding Downtown Development Alternatives which

compares the proposed project to a series of Department of City Planning proposals concerning the size, design, height and appearance of new office buildings in downtown San Francisco, under office/commercial and office/commercial/housing development scenarios.

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## **I. PROJECT DESCRIPTION**

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### **A. OBJECTIVES OF PROJECT SPONSOR**

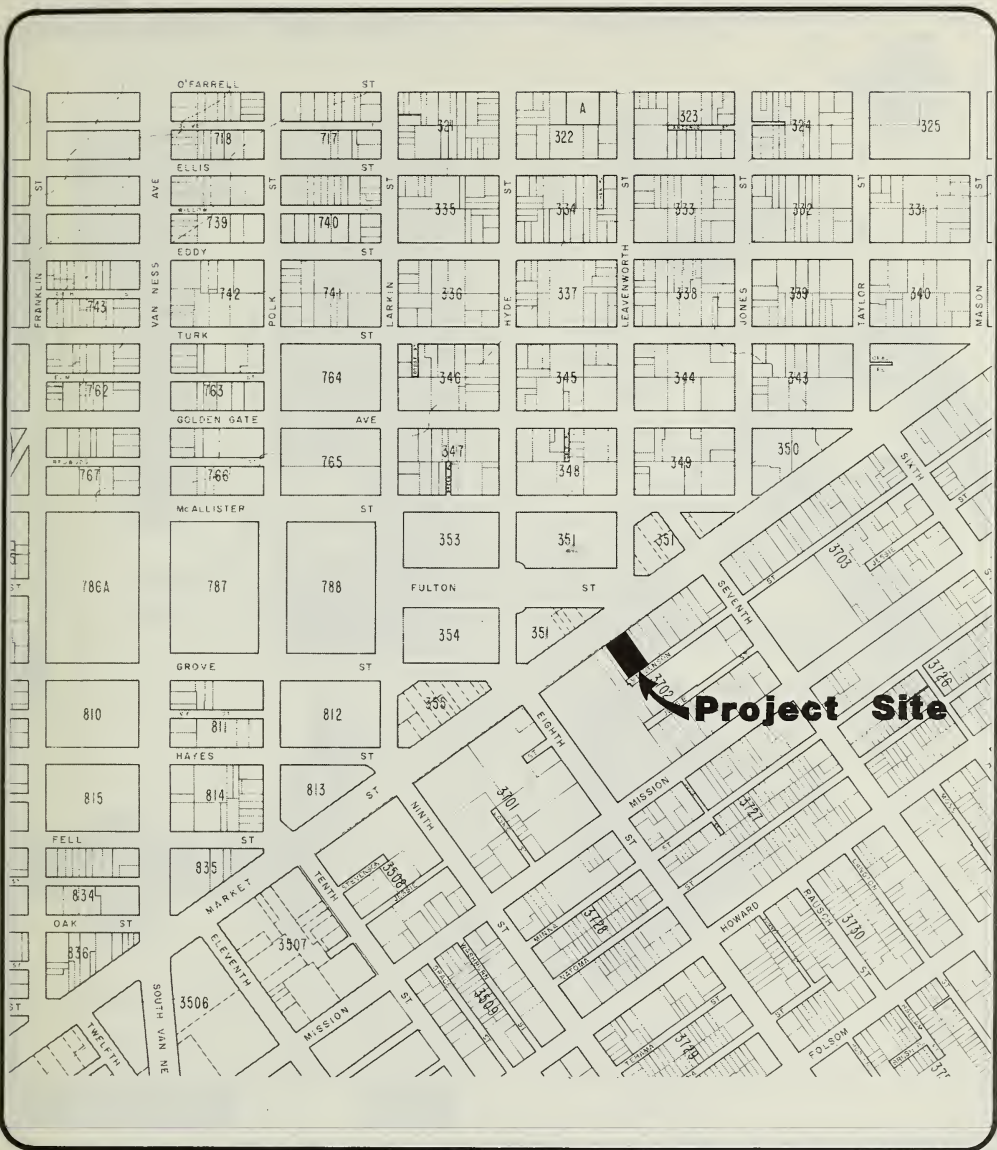
The proposed project is being designed for general office use by corporations or individuals who would relocate to the building from other office spaces in San Francisco or from areas outside the City. The project sponsor, Trinity Properties, Inc., San Francisco, proposes to provide office space to tenants desiring to be located on or near Market Street in the Civic Center area. Architects for the building are Backen, Arrigoni and Ross, Inc., San Francisco.

### **B. LOCATION**

The proposed project would be an office building located on the south side of Market Street between Seventh and Eighth Streets on Assessors Block 3702, Lots 44-44A (Figures 1 and 2, pages 7 and 8). The project site measures 88 feet along the Market Street frontage and is 165 feet deep, containing a total of 14,520 square feet. The project site is generally within the Civic Center area, one to two blocks away from Civic Center buildings.

### **C. PROJECT CHARACTERISTICS AND SCHEDULING**

The proposed structure would contain 13 floors, and have a basement for utilities and mechanical equipment (Figures 3 and 4, pages 9 and 10). Total gross square footage contained within the structure would be approximately 145,200 square feet. About 137,200 gross square feet would contain office uses on Floors 2 through 13. The ground floor would contain about 8,000 gross square feet of retail space. (Net rentable office space would be about 105,000 square feet.)



## Site Location Map

SOURCE: S.F. DEPARTMENT OF CITY PLANNING

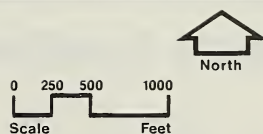
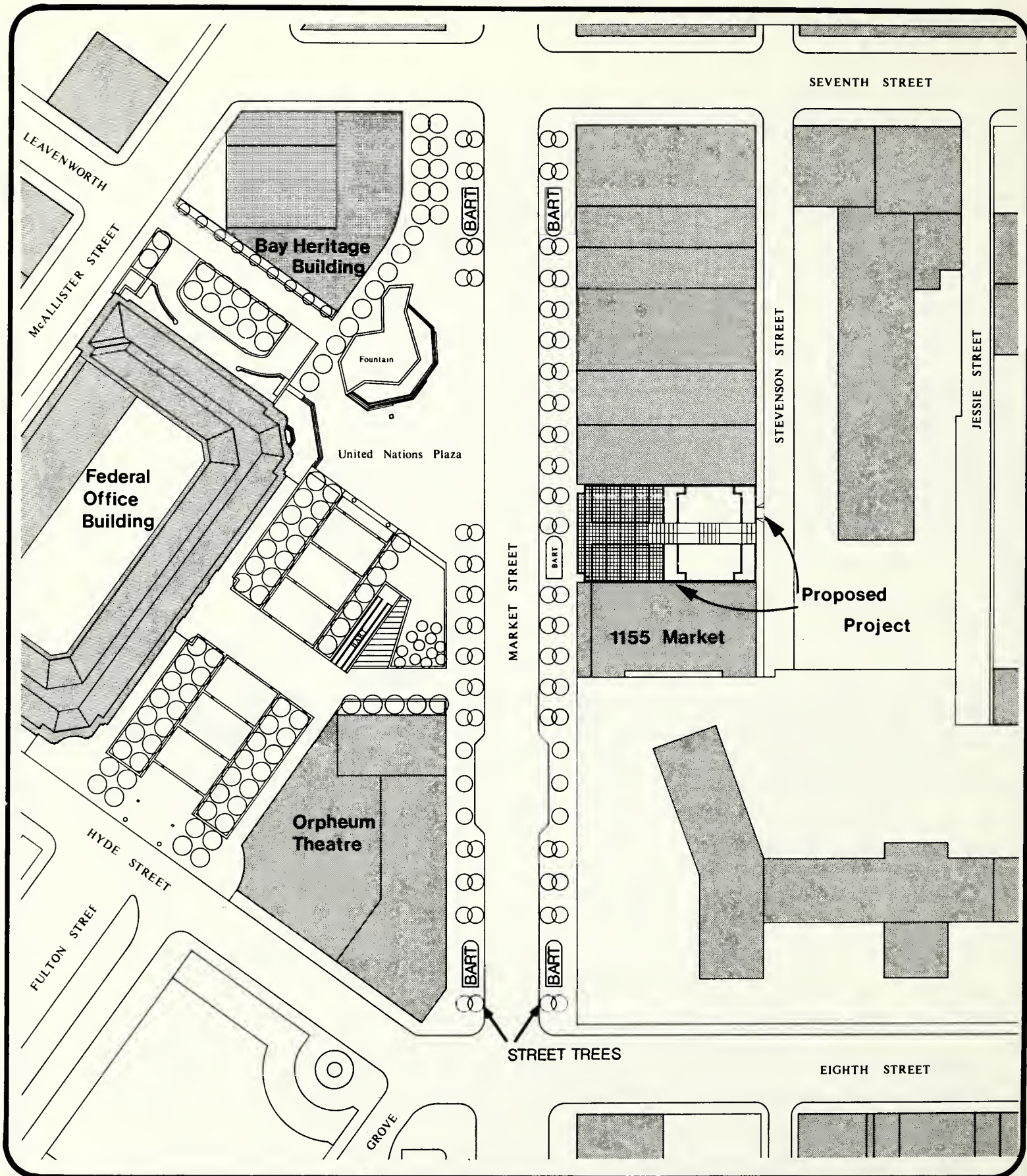


Figure No. 1





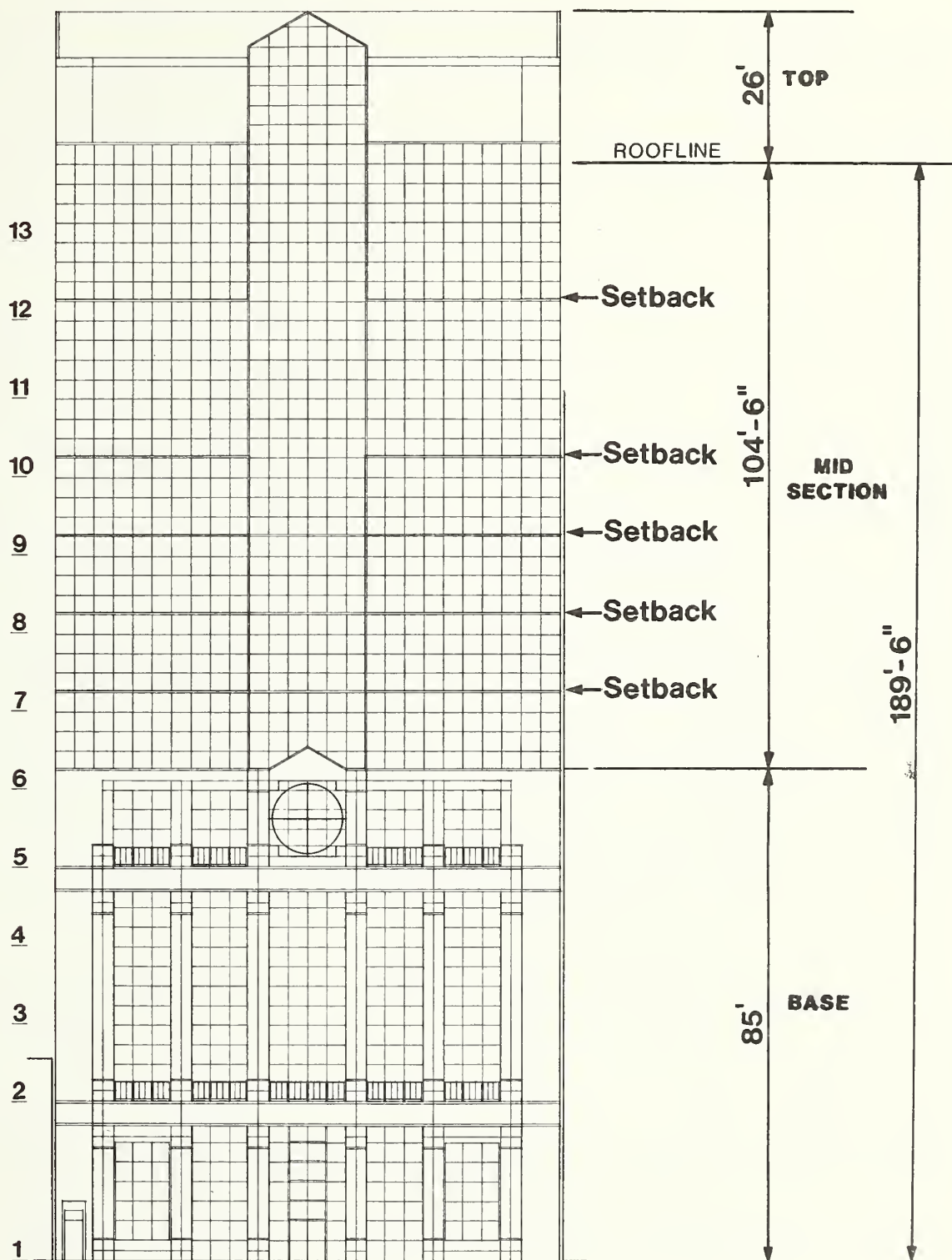
## Project Location Map

SOURCE: Backen, Arrigoni and Ross, Architects

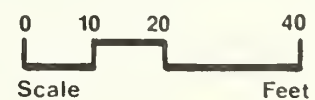


Figure No.2



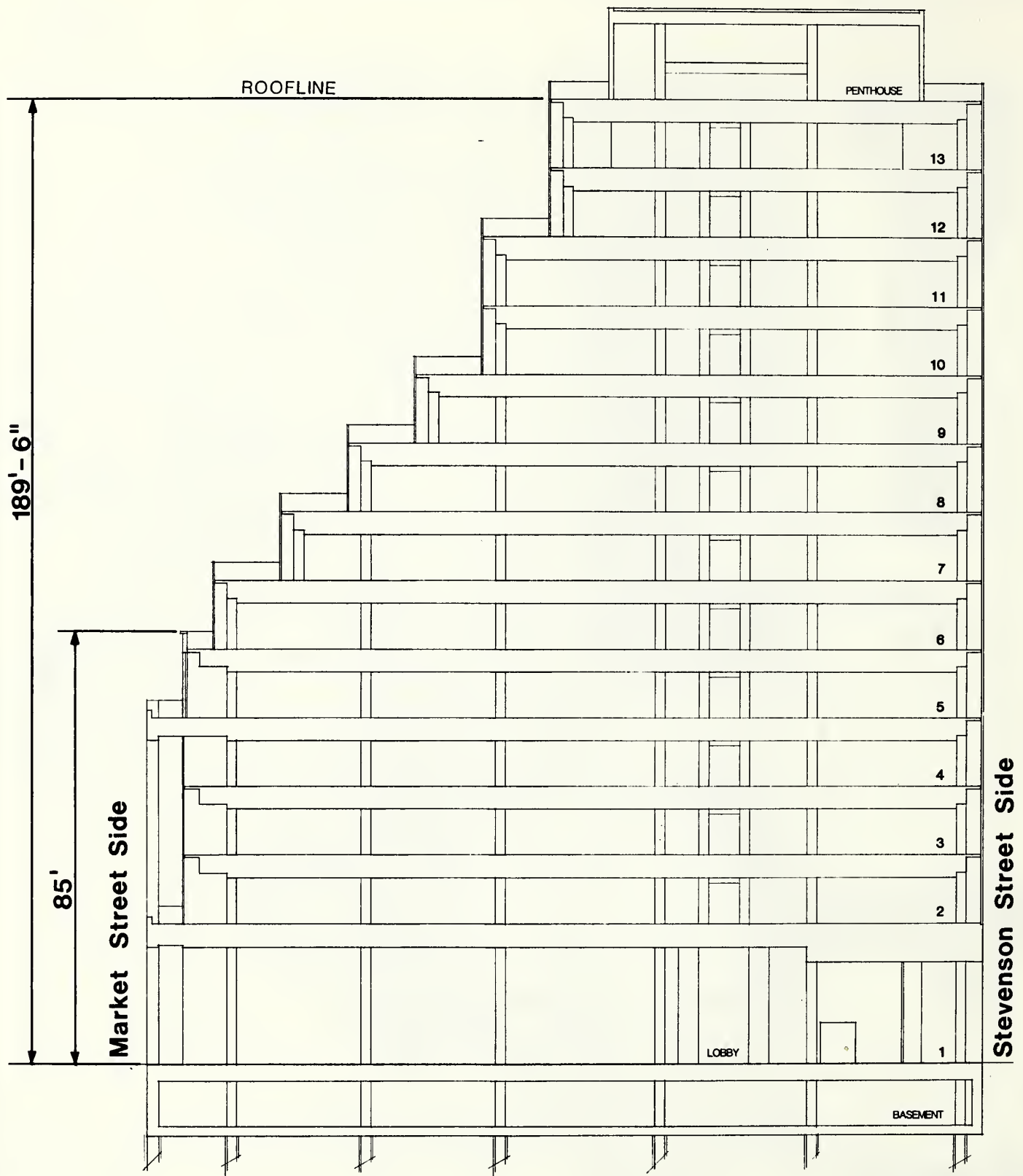


## Market Street Facade

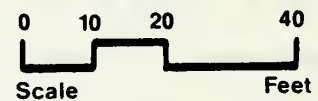


SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 3



## Building Section Looking East



SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 4



The ground-floor retail space, building lobby and elevators would be accessible via a central pedestrian passageway extending from the Market Street side of the building to Stevenson Street, which abuts the south side of the structure. (Figure 5, page 12). A loading dock providing loading space for a standard single-unit truck and trash bin area would be located at the rear of the building on the ground floor accessible from Stevenson Street. No short- or long-term parking would be provided.

The building would be set back 45 feet from the Market Street property line at the 85-foot height level, and floors above that level would be progressively stepped back. An open-air balcony containing potted trees, shrubs and vines would be provided at each stepped level. The structure would be constructed on pilings for support due to existing soil characteristics. The building would be framed in steel, and would contain light-grey concrete exterior building walls with clear glass windows below the 85-foot level. The levels stepped away (inward) from Market Street above the 85-foot level would contain clear glass window panes set into a grid pattern of white enameled frames. The objective of the project architects is to design a light-colored building with a crystalline appearance that would visually relate to the cornice<sup>1</sup> of the Federal Building, scale, height, bulk and proportions of buildings in the project area (Figures 6, 7 and 8, pages 13, 14, and 15). The building would include design detailing and coloring that would reflect the design and coloring of the Civic Center buildings and Federal Office Building adjacent to the United Nations Plaza on the north side of Market Street opposite the project site.

The structure would be designed with a base, midsection and top (Figure 3, page 9). The base would rise 85 feet in height. The Market Street face of the base would be visually defined by ceramic tiles at the base and top of the columns. The balcony at the second floor and the setback at the fifth floor would be fronted with decorative iron railings. The columns would rise from the second floor to the fifth floor, giving vertical emphasis to the balcony. All glass in the base of the structure would be clear, enabling passers-by to view activities within the building.

The building's midsection, composed of setbacks and terraces, would be accessible to building tenants. The top of the structure (a mechanical penthouse) would consist of a vertical, glass-enclosed space with a roof pitched on two sides terminating the building's height. The setbacks of the midsection and top of the structure would give the appearance of a building that is increasingly slender at upper levels up to the roofline.

S T E V E N S O N S T R E E T

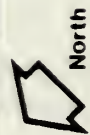
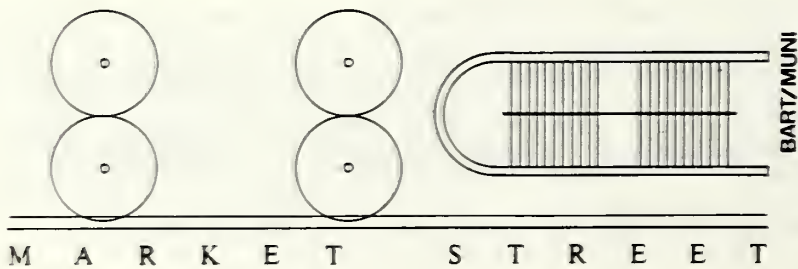
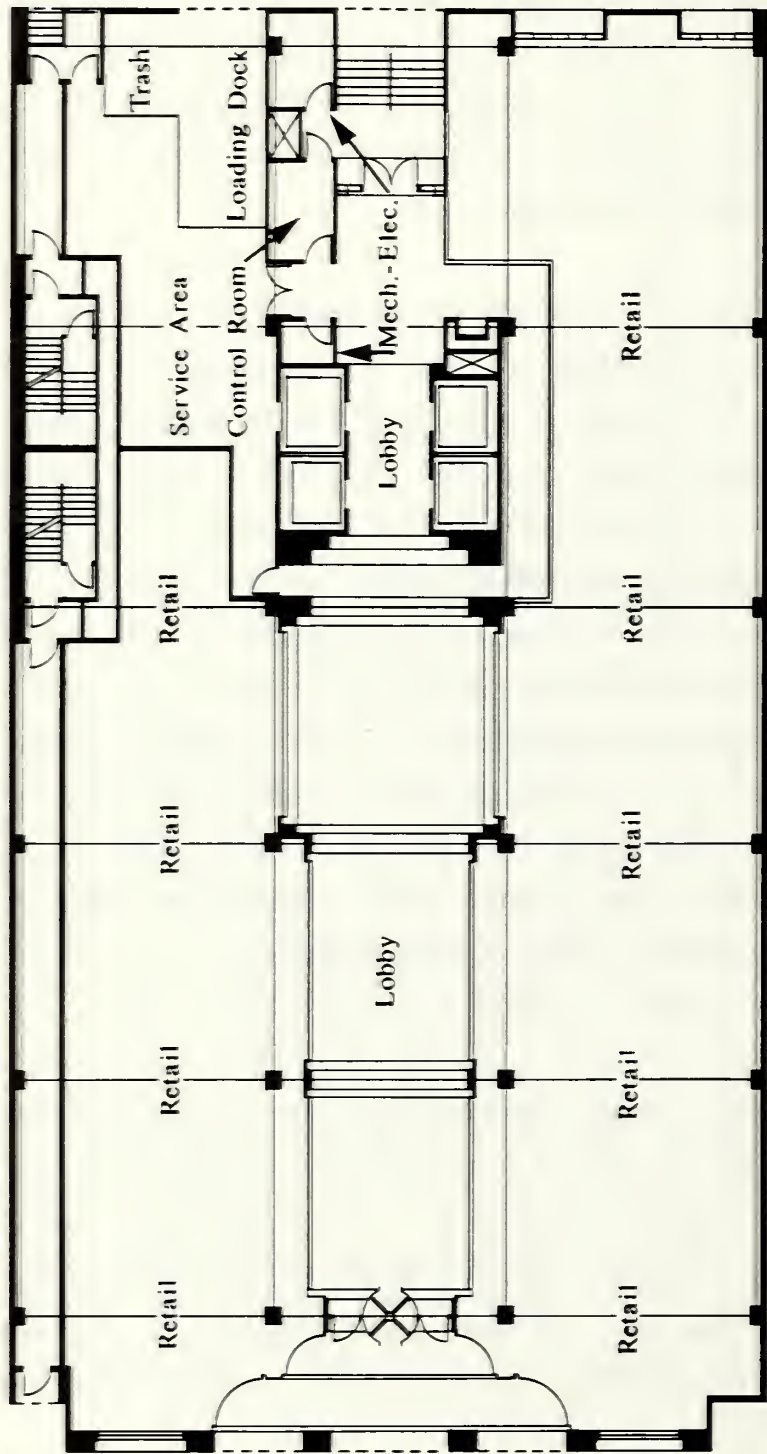
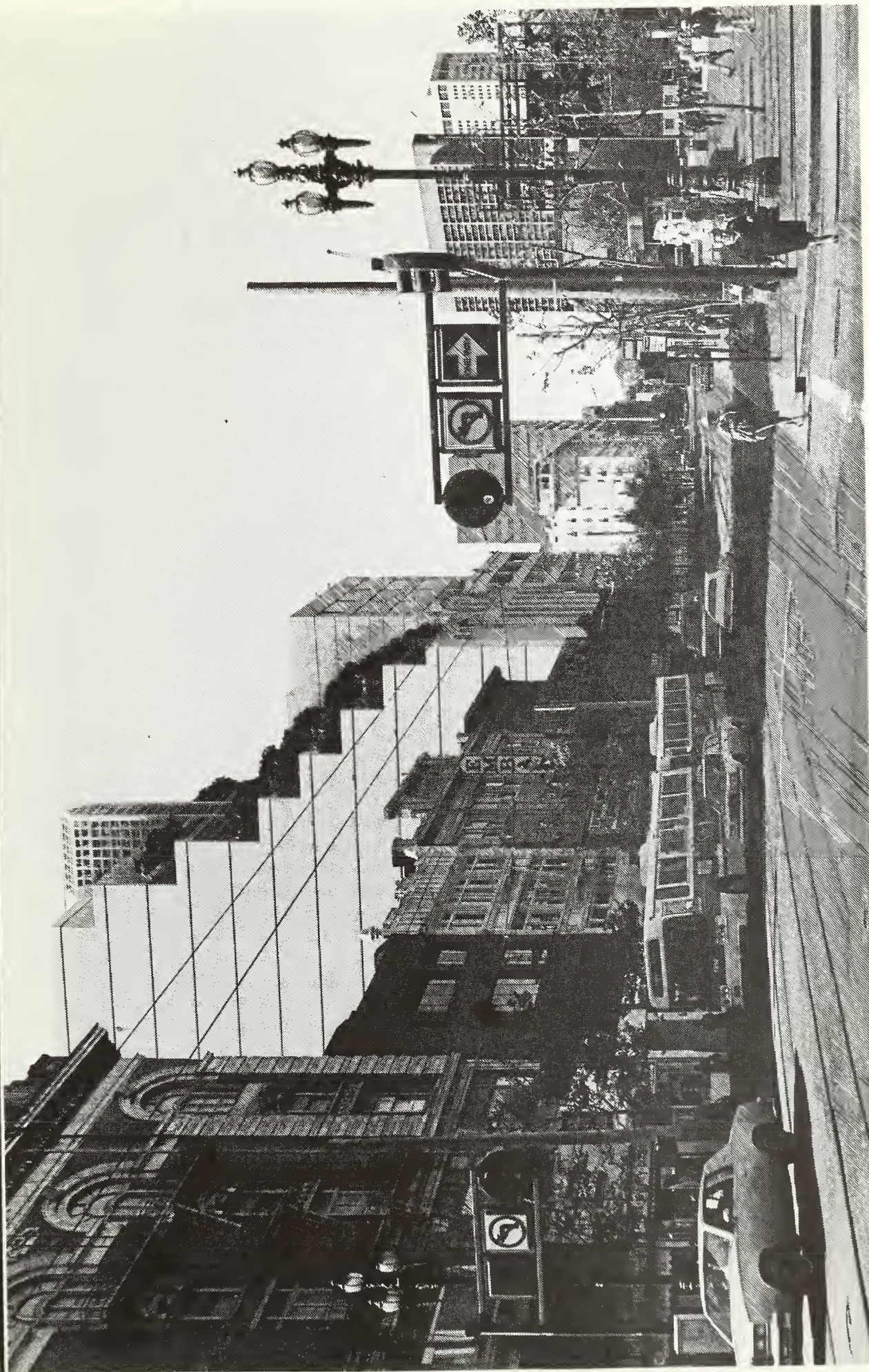


Figure No. 5

## Street Level Plan

SOURCE: Backen, Arrigoni and Ross, Architects





## **Photomontage:**

**PROPOSED PROJECT VIEWED SOUTHWEST FROM INTERSECTION  
OF MARKET AND SEVENTH STREETS**

**Figure No. 6**

SOURCE: BAR, INC., ARCHITECTS, AND HARTMUT GERDES





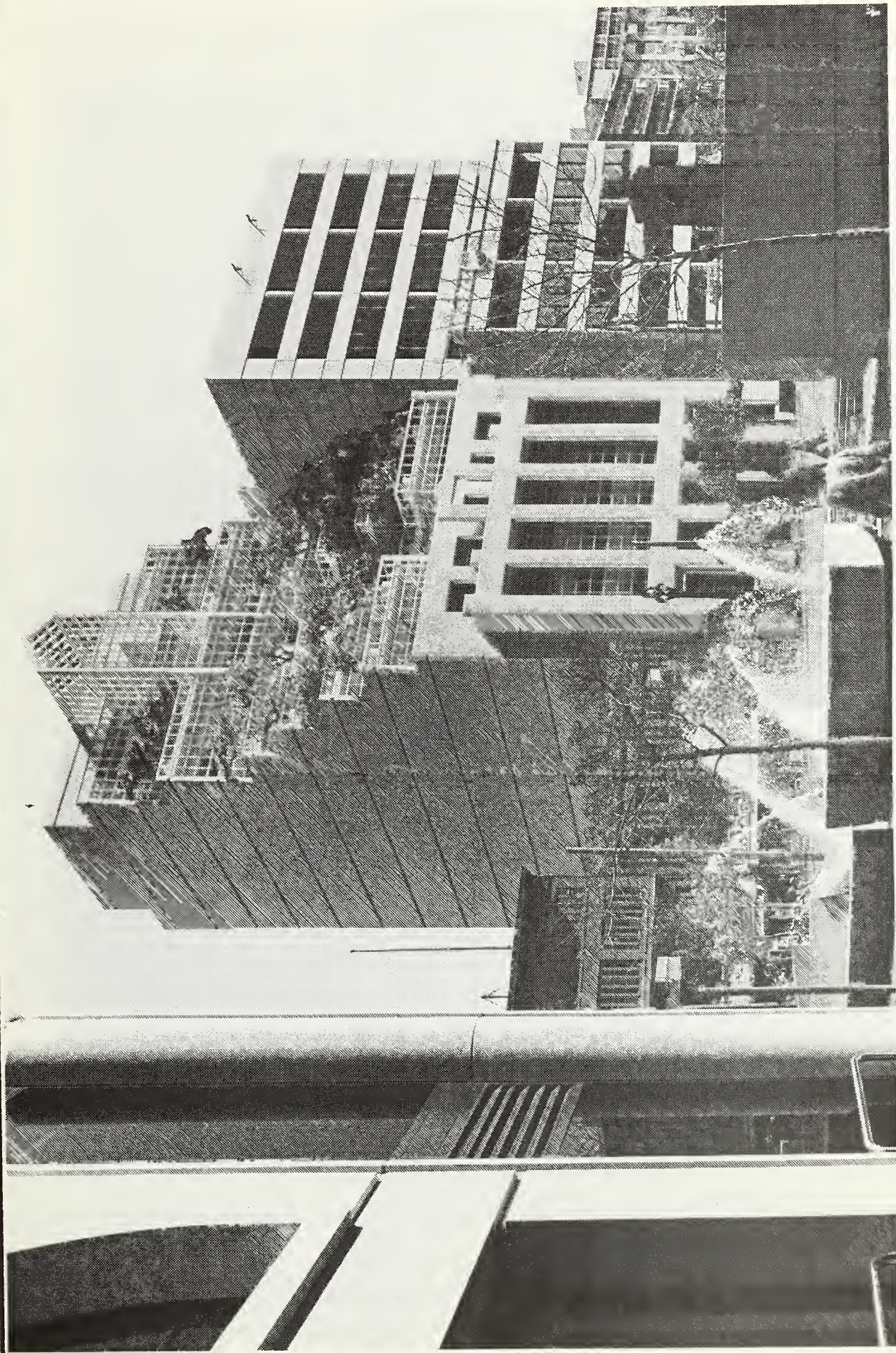
## Photomontage:

**PROPOSED PROJECT VIEWED NORTHWEST FROM INTERSTATE 80  
OVERPASS BETWEEN SIXTH AND SEVENTH STREETS**

**Figure No. 7**

SOURCE: BAR INC., ARCHITECTS, AND HARTMUT GERDES





## **Photomontage:**

**PROPOSED PROJECT VIEWED SOUTH FROM UNITED NATIONS PLAZA  
NEAR FOOT OF LEAVENWORTH ST.**

**Figure No. 8**

SOURCE: BAR, INC., ARCHITECTS, AND HARTMUT GERDES



The proposed project would require demolition of the four-story, 43,560-square-foot Civic Center Market building on the project site that is vacant (Figure 9, page 17). The structure previously contained a delicatessen, grocery store and restaurant on the ground floor, occupying about 14,500 gross square feet of space. The remainder of the structure was devoted to office space, about 29,000 gross square feet.<sup>2</sup> The proposed project would therefore introduce approximately 108,200 net new square feet of office space on the site. Estimated project construction costs are about \$10,000,000. Construction would be expected to begin in early 1984 and initial occupancies could take place in mid-1985.

### D. REQUIRED APPROVALS

The proposed project would not require any exceptions to the City Planning Code (see Section II.A., Land Use and Zoning, page 18). The project would be subject to Discretionary Review by the City Planning Commission.<sup>3</sup> Evaluation criteria under this process applicable to the proposed project would include the protection and enhancement of the pedestrian environment; adequate and appropriate means of transportation to and from the project site; energy conservation; physical relationship of the proposed building to its environs; and effects on views from public areas and on the City skyline.

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<sup>1</sup>Cornice: A horizontal member that crowns and visually defines the top of a building.

<sup>2</sup>Backen, Arrigoni and Ross, Architects, Michael Chait, telephone communication, January 24, 1983 and March 9, 1983.

<sup>3</sup>San Francisco City Planning Commission, Resolution 8474, adopted January 17, 1980, applicable to all proposals in the C-3 district.



View south of project site from United Nations Plaza.



View southeast of project site from north side of Market Street.

## Project Area Photographs

SOURCE: EIP Corp.

Figure No. 9



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## II. ENVIRONMENTAL SETTING

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### A. LAND USE AND ZONING

#### 1. Land Use

The project site is within an urbanized, developed area adjacent to the Civic Center. North of the site, across Market Street, are the United Nations Plaza, the 5-story, 60-foot-high Federal Office Building; the 4-story, 74-foot-high Orpheum Theater (a designated City landmark), and the 6-story, 84-foot-high Bay Heritage Financial building (Figure 2, page 8).

The 95-foot-high Mardikian Building, 1170 Market Street, is currently under construction directly east of the Orpheum Theater. Adjacent to the proposed project's west property line is the 11-story, 150-foot-high 1155 Market Street building currently under construction, which would be devoted to office use with ground floor retail space. Buildings east of the site are devoted to office use including ground-floor retail and restaurants; the Embassy and Strand Theaters; and the National Hotel, which offers daily, monthly and weekly rates. To the south is the Greyhound Bus Terminal and the Odeon, a residential hotel. The Trinity Apartments and Greyhound Bus Terminal occupy most of the project block. Most terminal activities occur in the building on Seventh Street while bus parking is provided in the area bordering the south portion of the project site.

Two blocks southwest of the project site is the Fox Plaza complex consisting of a 29-story structure containing residential units, office and retail space, and a companion structure 2 stories high containing office and retail space.

Across Eighth Street southwest of the project block is the 13-story Holiday Inn, Franklin Savings, the 10-story San Franciscan Hotel and a parking structure. A 17-story expansion of the Holiday Inn (EE79.314) has been approved, but has not been constructed on a site currently containing a parking structure. Along Mission Street near the project site there is a variety of commercial/retail uses including clothing outlets, and electronic, auto repair and import-export shops.

The project site currently contains the 4-story Civic Center Market building. The ground floor of the structure was destroyed by fire about one year ago. In previous years, upper floors of the building, devoted to general office use, were vacated when tenant leases were not renewed.

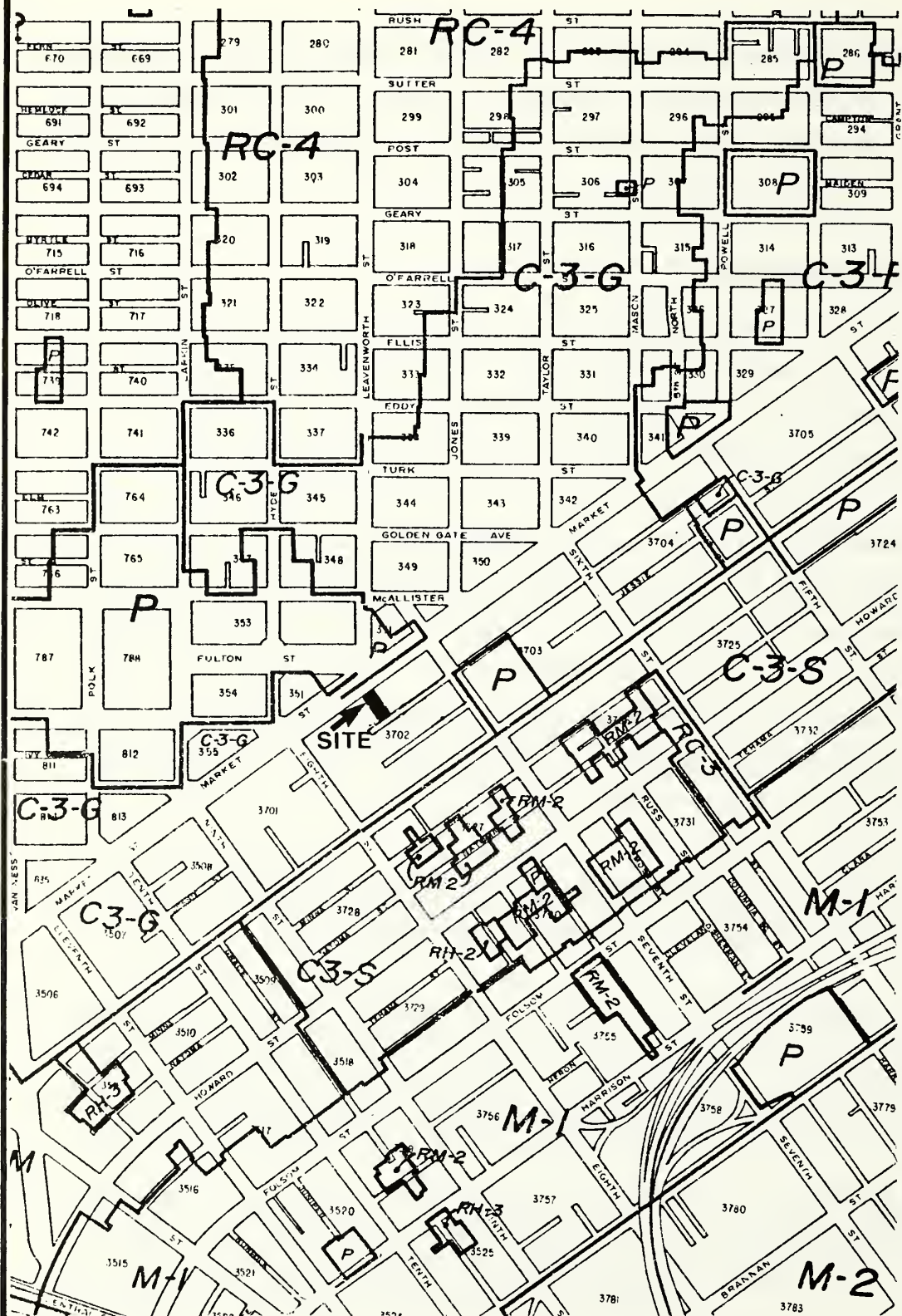
### 2. Zoning and Planning Considerations

The project site is in a C-3-G (Downtown General Commercial) zoning district (Figure 10, page 20). A maximum Floor Area Ratio (FAR) of 10 to 1 is permitted in this district by Section 124 of the Planning Code. On the project site, the maximum permitted gross floor area is 145,200 square feet, which is the amount proposed in the project.

The height and bulk district for the site is 240-G (Figure 11, page 21). This allows a maximum building height of 240 feet, with a maximum building length of 170 feet and a maximum diagonal dimension of 200 feet above a height of 80 feet. The proposed building would be 189 feet, six inches in height to the roofline, have a maximum length of 165 feet and a maximum diagonal dimension of 188 feet above a height of 80 feet. A mechanical penthouse housing the elevator machinery, cooling towers, boiler and emergency generator would rise 26 feet above the roofline.

The office and ground floor retail uses proposed in the project are permitted in C-3-G districts and would be similar to existing and approved adjacent land uses.

Existing office space in downtown San Francisco totals about 57.2 million gross square feet (see Appendix D, Table D-3, page A-98). About 8.9 million gross square feet of office space is currently under construction. About 5.9 million gross square feet has been formally approved, but is not yet under construction, and an additional 4 million gross square feet of office space is under formal review. Together these total 18.8 million gross square feet of new office space. About 1.5 million gross square feet of existing office space has been or is proposed to be demolished to clear the sites for these office developments. This results in a net addition of 17.3 million gross square feet of new office space in downtown San Francisco. For analysis purposes, the 17.3 million gross square feet of net new space is used, because it refers to the amount of new construction in excess of existing space on each site in terms of gross square feet of floor space. If these projects were all completed, San Francisco would have a total of approximately 74.5 million square feet of office space.



LEGEND:

HOUSE CHARACTER  
DISTRICTS -  
RH-2, RH-3

MIXED HOUSE AND  
APARTMENT CHARACTER  
DISTRICTS -  
RM-2

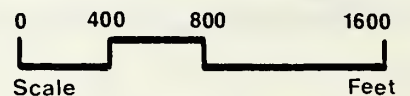
RESIDENTIAL-  
COMMERCIAL  
COMBINED DISTRICTS -  
RC-4

COMMERCIAL DISTRICTS -  
C-3-G, C-3-S

INDUSTRIAL  
DISTRICTS - M-1,  
M-2

PUBLIC DISTRICT - P

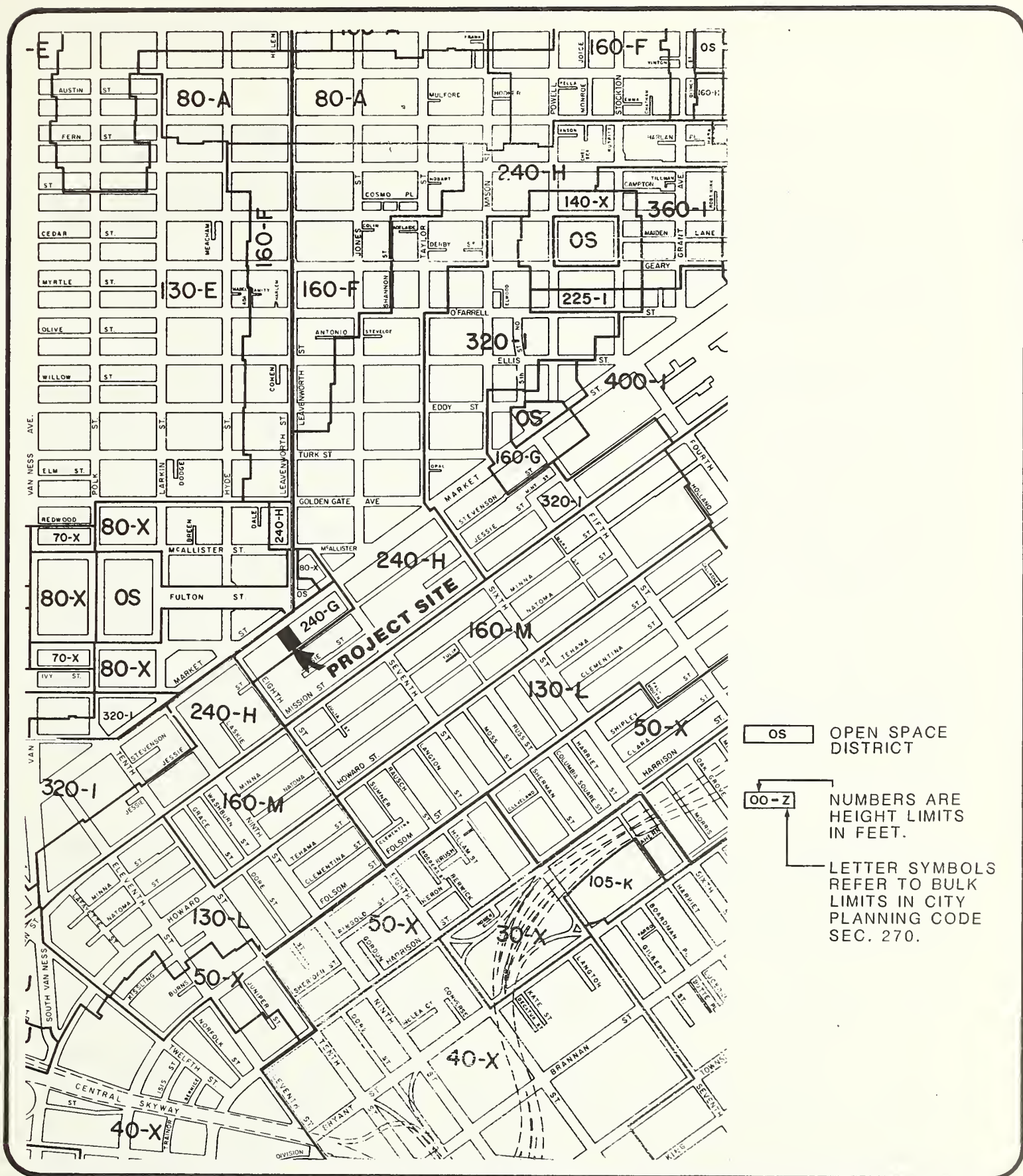
# Zoning Map



SOURCE: CITY & COUNTY OF SAN FRANCISCO

Figure No.10





The above numbers and the cumulative analyses in this report are based on a list of office buildings, prepared by the Department of City Planning. On January 27, 1983 each building was in one of three categories: (1) under formal review by the Department of City Planning; (2) approved but not yet under construction; and (3) under construction. These buildings and the total square feet of office and retail space in each category are listed in Appendix D, Tables D-1 and D-2, pages A-94 and A-97.

The cumulative list contains only those buildings which are, or have been, formally under review by the Department of City Planning and the Department of Public Works, or for which plans are well defined. Not included are projects which are in an early planning stage but do not furnish information on types of use and floor areas of office and retail space. Thus, excluded are buildings in the Yerba Buena Center Redevelopment Area, Mission Bay of the Southern Pacific Land Company, the Rincon Hill-South Beach Redevelopment Area, and unfunded state and federal office building proposals. The cumulative list does contain those office buildings in the Yerba Buena Center Redevelopment Area which are under construction or for which Land Disposition Agreements have been approved, and which have definitely identified floor area figures. The San Francisco Redevelopment Agency is currently considering a range of additional amounts of office space but the nature and scale, including floor area, are tentative. Therefore, potential office space in Yerba Buena Center is not included. The general basis for future development will be in accordance with the Yerba Buena Center Redevelopment Plan as amended. Hotel projects have not been included in the cumulative analyses because hotel uses have different parking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. The reason for this methodology is more fully explained in Appendix C, page A-83.

The totals indicated in Appendix D, Table D-1, page A-94, may differ from those shown in earlier EIRs as they are based on the status of projects as of January 27, 1983. Some projects included in earlier totals have been removed from the cumulative impact analyses because they have been withdrawn from formal review or for other reasons of inactivity. On the other hand, some projects not included in earlier totals have been added to the cumulative totals because they have been activated. In sum, the lists for the cumulative analyses in this report represent to the extent practicable the most current official record of office buildings completed, in progress, or in the review process.

The discussion of cumulative development describes in static terms a fluid situation. The environmental setting is in a constant state of flux and transition.



### B. TRANSPORTATION

#### 1. Street and Highway Network

The project site is located in a grid network of local streets (see Figure 1, page 7). Market, Fell, Oak, Howard and Folsom Streets are important east-west streets in the vicinity of the proposed project. Van Ness Avenue and Franklin, Sixth, Seventh, Eighth, Ninth, and Tenth Streets are important north-south streets. All of the foregoing streets are designated "Major Thoroughfares" in the Transportation Element of the City's Comprehensive Plan.<sup>1</sup> In the project area, Market, Mission, Seventh, Eighth, (Ninth and Tenth between Market and Mission) Leavenworth, Hyde, and Larkin Streets and Van Ness Avenue are designated "Transit Preferential Streets" in the Transportation Element of the City's Comprehensive Plan.<sup>2</sup> The project site fronts on Market and Stevenson Streets. Market Street, a four-lane street, is both a Major Thoroughfare and Transit Preferential Street as mentioned above. Stevenson Street is a two-lane service alley providing access to buildings located between Market and Mission Streets.

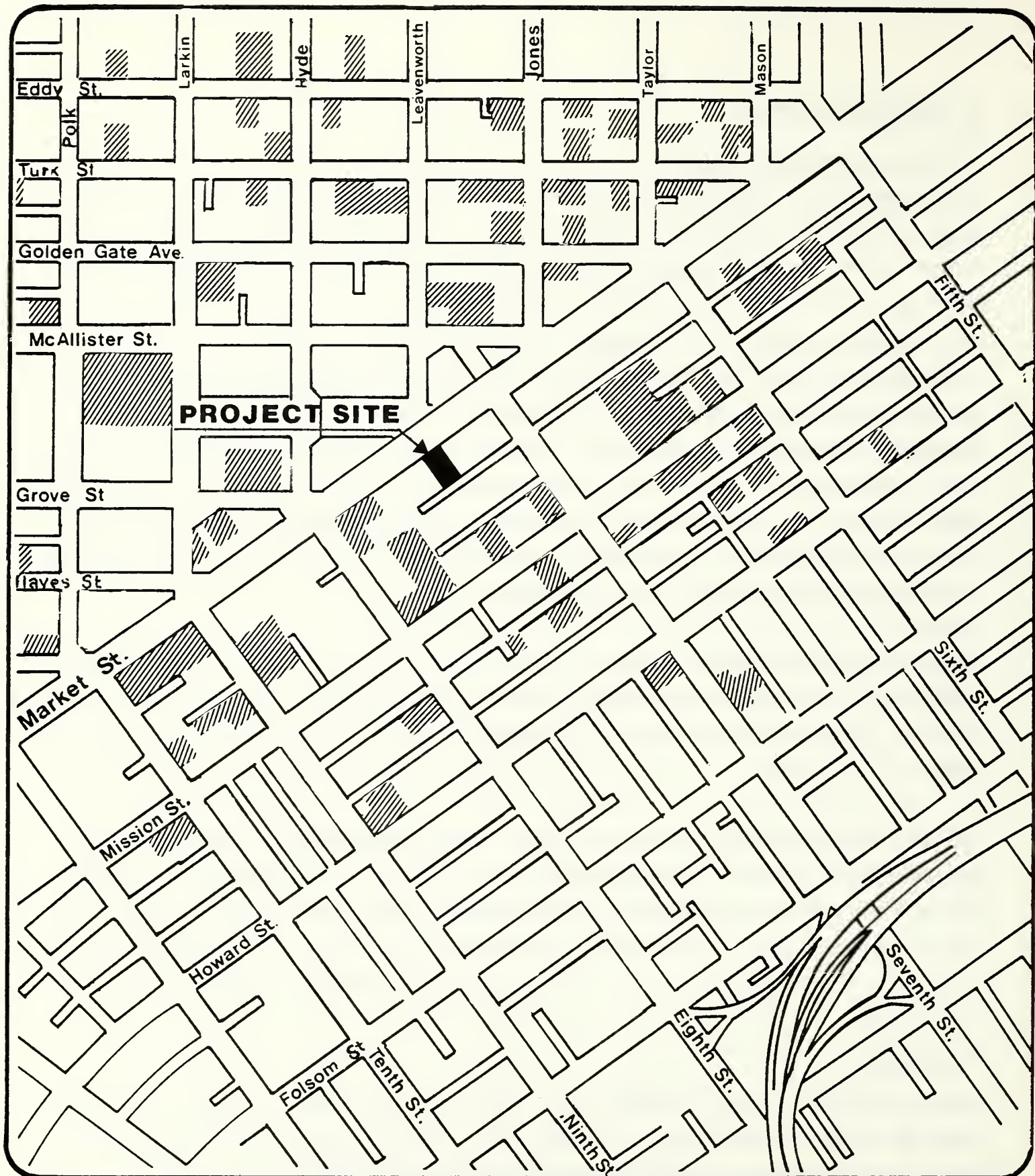
Regional access to/from the East Bay and Peninsula is available via I-80, I-280 and Highway 101, with ramps located south of the project site. Access to/from the North Bay would be via surface streets with the Van Ness Avenue corridor serving as the probable route.

The project site is within the Downtown Core automobile control area as designated in the Transportation Element. This is defined as an area where "priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors. . . . the limited street and parking space within this core should be available for these functions" and "a continuing effort should be made to reduce the impact of the private commuter vehicle."

#### 2. Parking

Public off-street parking facilities have been surveyed within a 2,000 foot walking distance of the site (see Figure 12, page 24).<sup>3</sup> This area has about 5,600 public off-street spaces available with an occupancy of approximately 92%.

The Market Street block face has an unmetered, four-vehicle commercial loading zone near Seventh Street. The Seventh Street block face has four unmetered commercial loading zones.



## Public Off-Street Parking



Off-Street Commercial Parking



North  
Not to Scale

SOURCE: SURVEY BY TJKM, TRANSPORTATION CONSULTANTS  
ON 3/12-13/81. REVISED TO REFLECT PROJECTS UNDER  
CONSTRUCTION, APPROVED OR UNDER FORMAL REVIEW  
AS OF 1/27/83.

Figure No.12



### 3. Pedestrian Facilities

A recent transportation study for the project area showed that the sidewalks and crosswalks serving the project site operate at "unimpeded" conditions during peak hours (pedestrian flow definitions are included in Appendix B, Table B-2, page A-76, ).<sup>3</sup>

### 4. Transit Service

The project site is within 2,000 feet of 25 Muni lines (see Figure I3, page 26). The project site would also be served by BART (via the Civic Center station), Golden Gate Transit (via the Civic Center Transbay routes), and San Mateo County Transit (via bus lines on Mission Street).

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<sup>1</sup> Major thoroughfare: a cross-town thoroughfare whose primary function is to link districts within the City and to distribute traffic from and to the freeways; a route generally of City-wide significance. From the Thoroughfare Plan of the Transportation Element of the San Francisco General Plan adopted by Resolution 6834 of the San Francisco Planning Commission, April 27, 1982.

<sup>2</sup> Transit street: an important street for transit operations where interference with transit vehicles by other traffic should be minimized. Transit arterial streets: routes of major arterial transit lines. From the Thoroughfare Plan of the Transportation Element of the San Francisco General Plan, adopted by Resolution 6834 of the San Francisco Planning Commission, April 27, 1982.

<sup>3</sup> TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981 (EE81.25, Final Negative Declaration issued by San Francisco DCP, August 13, 1981).

## Transit Services

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  5 MUNI Lines
  ..... Golden Gate Lines
  //// SamTrans Lines

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North  
Not to Scale

### Figure No.13

### C. AIR QUALITY

Because air quality standards are not met in all areas of the Bay Area, the Bay Area Air Quality Plan, as part of the Environmental Management Plan (EMP) and State Implementation Plan (SIP) for California, has been prepared by the Association of Bay Area Governments (ABAG) and other governmental agencies.<sup>1</sup> This Plan contains a strategy for the long-term attainment and maintenance of air quality standards. It includes measures to reduce emissions from stationary sources and automobiles and suggests transportation measures to reduce automobile emissions. The air quality problems addressed in the Bay Area Air Quality Plan are photochemical oxidants, carbon monoxide, and suspended particulates.

The Plan has been revised to adjust the strategies for attainment of air quality standards by 1987.<sup>2</sup> This effort focused on updating plan assumptions, reviewing implementation of adopted controls and analyzing and recommending new controls. The revisions address carbon monoxide and ozone air pollution issues.

San Francisco's persistent summer winds and its upwind position with respect to major pollutant sources continue to give it possibly the cleanest air in the Bay Area. Despite these advantages, there are periods, usually in fall and winter, when the air becomes stagnant. At these times the entire Bay Area has poor air quality. In 1980, state and federal standards for total suspended particulates (TSP) were exceeded in San Francisco; in 1981, only the state standards for suspended particulates was violated. In 1980 and 1981 other measured pollutants were all below the standards. (See Appendix E, page A-101).<sup>3,4</sup> The state 24-hour TSP standard was violated on one occasion.<sup>2</sup>

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<sup>1</sup> Association of Bay Area Governments, 1979 Bay Area Air Quality Plan, Berkeley, California, January 1979.

<sup>2</sup> Association of Bay Area Governments, 1982 Bay Area Air Quality Plan, Draft for Public Review, Berkeley, California, July 1982.

<sup>3</sup> Bay Area Air Quality Management District, Air Currents, Vol. 24, No. 3, San Francisco, California, March 1981.

<sup>4</sup> Bay Area Air Quality Management District, Air Currents, Vol. 25, No. 3, San Francisco, California, March 1982.



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### III. ENVIRONMENTAL IMPACTS

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#### INTRODUCTION

An Initial Study of the proposed project was published on January 28, 1982. Based on the findings of the Initial Study, a Preliminary Negative Declaration was issued on the project on May 21, 1982. An appeal to this determination was filed with the Department of City Planning on June 1, 1982. On September 2, 1982, the City Planning Commission determined that the proposed project may have significant environmental impacts and that an Environmental Impact Report (EIR) was required. In accordance with the Commission's action, this focused EIR provides further impact analysis in the areas of cumulative development in the context of transportation and air quality impacts, and growth inducement. The Initial Study is included as Appendix A, page A-1, of this EIR. Project-generated transportation and air quality impacts are included for informational purposes and provide a preface to the cumulative analysis.

#### A. TRANSPORTATION

##### 1. Project and Cumulative Trip Generation/Distribution

The City's transportation impact analysis guidelines suggest that 17.5 daily person trips should be assumed as the trip generation rate per 1,000 square feet of net area in an office project.<sup>1</sup> It is estimated that the project's commercial areas would generate 150 daily person/trips per 1,000 square feet of net retail area.<sup>2,3</sup>

The proposed project would have a net office area of 105,000 square feet and a retail area of 8,000 square feet. As shown in Table 1, page 29, the proposed project would generate about 3,040 daily person trips of which approximately 1,110 would be work trips and 1,930 would be non-work trips. Approximately 490 of the daily trips would occur during the evening peak-hour. It is estimated that up to 25% of the commercial trips would be internal -- trips by office employees to/from the commercial areas.<sup>4</sup>



TABLE I  
PROJECT PERSON TRIP GENERATION

Land Use	Daily Trip Rate per Floor Area	Daily Trips	Ratio of Work/Non- Work Trips	Daily Work/Non- Work Trips	% Daily Trip in P.M. Peak Hour (4:30-5:30)	P.M. Peak Hour Trips
105,000 sq. ft. Office	17.5 <sup>1</sup> /1,000 sq. ft.	1,840	57%/43% <sup>1</sup>	1,050/790	20% <sup>1</sup>	370
8,000 sq. ft. Commercial	150/1,000	1,200 <sup>3</sup>	5%/95% <sup>4</sup>	60/1,140	10% <sup>2</sup>	120 <sup>3</sup>
		3,040		1,110/1,930		490

<sup>1</sup>From: San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, July 3, 1980 (revised October 1980).

<sup>2</sup>From: California Department of Transportation, 11th Progress Report on Trip Ends Generation, San Francisco, July 1976, pages 168, 171.

<sup>3</sup>An estimated 25% of these trips would be internal to the proposed project (between the office tenants and commercial areas).

<sup>4</sup>Institute of Transportation Engineers, Trip Generation, Virginia, 1979.

Cumulative travel for downtown office projects under construction, approved or under formal review as of January 27, 1983 as listed in Appendix D, Table D-1 page A-94 (about 17.3 million gross square feet), would be approximately 48,000 peak-hour person trips. The 1145 Market Street project would amount to about 1.0% of the cumulative peak-hour trip generation of these projects.

Cumulative downtown travel reflects a land use approach. An alternative methodology involves travel projections based upon future employment in San Francisco (and throughout the region). Essentially the land use approach results in travel estimates which are 15% higher than those developed by the employment trend approach. Appendix C, pages A-83 to A-91, discusses the differences between the two approaches.

Based upon national research and the suggested modal split in the City guidelines, the apportionment of project trip generation has been calculated and compared to the cumulative trip generation of other development. The trip totals are outlined in Table 2, page 31, and are the basis for all trip-related impact analyses.

#### 2. Street Network

Assuming an auto occupancy of 1.4 the project would generate a total of about 105 auto trips during the p.m. peak hour.<sup>5</sup> Because the project would not include parking, project traffic would be to/from a variety of parking facilities and would tend to be dispersed on the area's streets. If two-thirds of the project traffic traveled through the analyzed intersections, volumes at these locations would increase by 1-2%. Cumulative downtown office development (projects under construction, approved or under formal review as of January 27, 1983), would increase existing downtown office space by about 35% to 40%.<sup>8</sup> If traffic to and from downtown increased proportionally, the effects on intersection service levels would be as outlined in Table 3, page 32.

TABLE 2  
PROJECT AND CUMULATIVE PERSON TRIP GENERATION DURING  
P.M. PEAK HOUR

<u>Mode and Distribution</u>	<u>Project</u>		<u>Other Development</u>	<u>Total</u>
	<u>Office</u>	<u>Commercial</u>		
Auto	135	10	17,750	17,895
Muni	105	15	12,650	12,770
BART	55	--	6,750	6,805
AC Transit	30	--	3,650	3,680
SamTrans	5	--	750	755
SP	15	--	2,000	2,015
GGT	15	--	2,000	2,015
Ferry	5	--	600	605
Charter <sup>1</sup> Bus			100	100
Other	<u>10</u>	<u>95<sup>1</sup></u>	<u>1,200</u>	<u>1,305</u>
TOTALS	375 <sup>2</sup>	120 <sup>2</sup>	47,450	47,945

<sup>1</sup> Includes 30 pedestrian trips to/from commercial areas which would be internal to the proposed project.

<sup>2</sup> The sum of these numbers exceeds the 490 person-trip projection (see Table 1, page 29) because intermodal transfers are included. These transfers are reflected in the modal split distribution outlined in Guidelines for Environmental Evaluation - Transportation Impacts, June 1980 (revised October 1980).

Source: Modal split factors for office buildings contained in Guidelines for Environmental Evaluation - Transportation Impacts, Department of City Planning, San Francisco, July 3, 1980 (revised October 1980). Model split for commercial derived from Transportation Engineering Journal of ASCE, January 1982, page 15.



TABLE 3  
EXISTING AND PROJECTED INTERSECTION SERVICE LEVELS

Intersection	Service Levels		
	Existing	1985 w/o Project	1985 With Project
Mission/Seventh	B	D-E	D-E
Mission/Eighth	C-D	E-F	E-F
Harrison/Seventh	A	C	C
Harrison/Eighth	A	B-C	B-C

Source: EIP Corporation. See Appendix B, pages A-78 to A-81 for calculations. See Table B-1, page A-75 for service level definitions.

The Mission/Seventh and Mission/Eighth intersections would be approaching unstable flows, while the Harrison/Seventh and Harrison/Eighth intersections would continue to operate satisfactorily. An increase of 1-2% in intersection volumes (due to the project) would not result in a further decrease in intersection service levels. The downtown freeway network is also a constraint on vehicle access to/from the project area. The Interstate 80 freeway operates at jammed conditions (service level E-F) during the evening peak-hour.<sup>6</sup> Thus, the overall congestion on the freeway can affect the flow on specific freeway links, or individual ramps or City streets approaching the ramps.

These traffic impacts assume that new downtown employees (generated by cumulative development) would continue to follow existing modal split patterns. Because the regional highway network is operating virtually at capacity during the p.m. peak-hour, new employees may choose to shift to alternate modes. This shift would also reflect the very limited parking available. As outlined in subsequent sections, BART, AC Transit and Southern Pacific service would increase capacity within the next five years. Although these systems would still be congested, they could attract an increasing share of the peak-hour travel. A secondary mode shift would be the increased formation of carpools and/or vanpools. With potential trends for increased transit usage and vehicle occupancy, the actual cumulative effects on the street network and parking demand would be correspondingly reduced.



3. Transit Service

## a. Muni

Table B-3, Appendix B, page A-77, outlines existing and projected p.m. peak-hour ridership on Muni lines outbound from the downtown area. The projections include increased ridership due to downtown development which is under construction, has been approved or is under formal review as of January 27, 1983. A load factor of 1.00 indicates ridership that is 150% of the available seating for bus lines and 220% of available seating on Muni Metro vehicles. Of the 25 lines serving the project area, 21 lines are projected to have load factors equal to or greater than 1.00 and these lines would experience extremely congested conditions (a load factor of 1.00 reflects full capacity and is considered to be the maximum acceptable load factor). The project would add about 120 p.m. peak hour passengers to these lines (Table 2, page 31), representing an increase of about 1.0% in the total projected ridership for all lines serving the site. The load factors would not be measurably affected by the project (see Table B-3, page A-77).

Muni projects a 19% increase in system capacity over the next five years. This increase would reflect added capacity in the Muni Metro light-rail service, and the replacement of existing buses with articulated coaches.<sup>7</sup> This capacity increase would relieve the projected load factors; specific benefits, however, would depend upon a more detailed improvement program with capacity increases cited for each route.

## b. BART

BART staff have provided the p.m. peak-hour operating statistics for outbound trains at their peak load points (during October-December 1982):<sup>8</sup> Existing patronage plus the 55 trips that would be generated by the project, in addition to cumulative development patronage, are outlined in Table 4.

TABLE 4  
BART PEAK-HOUR OPERATING STATISTICS

	East Bay			Daly City		
	Existing	With Project	*With Project and Cum. Dev.	Existing	With Project	*With Project and Cum. Dev.
Seats	9,924	9,924	9,924	6,912	6,912	6,912
Passengers	13,556	13,595	18,300	5,821	5,837	7,900
Average load factor	1.37	1.37	1.84	0.84	0.84	1.14

Load factors on the BART system represent the ratio of passengers to available seats.

\*Based on downtown office projects under construction, approved or under formal review as of January 27, 1983 as listed in Appendix D, Table D-1, page A-94.

The proposed project and cumulative downtown office development would increase BART ridership by about 6,800 riders. East Bay trains would experience average peak-hour load factors of 1.8-1.9 and higher factors on certain peak trains while Daly City trains would experience average peak-hour load factors of 1.1-1.2. The proposed project would add 55 passengers (less than 0.3%) to the existing BART patronage and there would not be a measurable increase in these load factors. BART's short-term (five-year) improvement program calls for an approximate 20% increase in capacity (with added cars and some decrease in headways).<sup>9</sup> These improvements would allow the peak-hour load factors to average 1.4-1.5 on East Bay trains 0.9-1.0 on Daly City trains. Although funding and scheduling is more tenuous, the Daly City tail track would improve system capacity by an additional 50%. This improvement would allow average load factors of about 1.0 on East Bay trains and 0.6 on Daly City trains.<sup>9</sup>

The projected load factors (with cumulative development) of 1.8-1.9 would represent an average of 130-140 p.m. peak-hour passengers on a 72-seat BART car. The planned system improvements would reduce peak-hour load factors so that few (if any) standees would be present.

#### c. Golden Gate Transit

Golden Gate Transit District operates 147 buses out of the downtown area during the afternoon peak hour, about 120 buses on Financial District routes, and 27 buses on Civic Center routes.<sup>10</sup> On the average, these buses run at 90-95% of their design capacity level as set by Golden Gate policy (i.e., at seating capacity). Golden Gate Transit allows a maximum (crush) capacity of 59 passengers per bus, corresponding to ten standees, which equals 8,675 peak-hour riders. Current peak-hour ridership out of downtown is estimated at 6,620 passengers. On certain peak runs, there may be more than ten standees.

With a maximum capacity of 8,675 peak-hour passengers, the effect of cumulative downtown development would be to raise patronage to about 8,600 passengers (99% of capacity). The proposed project would add 15 trips to the projected ridership (see Table 2, page 31) a patronage increase of about 0.9% on the Civic Center routes. Because of financial limitations, the District would probably not be able to increase its capacity to accommodate the increased demand. Any further patronage beyond current cumulative development shown in Table D-1, Appendix D, page A-94 could not be accommodated.



#### d. AC Transit

AC Transit operates about 200 buses outbound from the Transbay Terminal during the p.m. peak-hour.<sup>11</sup> Based on a capacity of 125% of available seating (AC policy accepts 25% standees) and an average of 50 seats per bus, space for 12,500 passengers is available. With a current peak-hour patronage of 9,000 during the peak hour, the overall capacity reserve is 3,500. Within the peak hour, certain of the peak runs have higher load factors and therefore no excess capacity.

The proposed project and cumulative development would generate about 3,680 trips, exceeding the 3,500-person capacity reserve. AC Transit staff indicate that capacity will be increased about 10% (to about 13,500 passengers) over the next three to four years, which will raise the capacity reserve. The projected patronage, including patronage from cumulative development outlined in Table D-1, Appendix D, page A-94, of about 13,200 persons could be accommodated within the system capacity. Each bus would have an average of 15-20 standees.

#### e. Southern Pacific

Current services provide 11 southbound trains with 9,000 seats during the p.m. peak-hour.<sup>12</sup> The current load factor (based on one seat per passenger) is 0.83, or approximately 7,470 seats.

Southern Pacific service will be improved by the addition (within three to five years) of approximately 1,200 seats to the southbound peak-hour capacity. With the system's existing reserve capacity of about 1,530 seats, the total capacity reserve would be increased to about 2,730 seats.<sup>12</sup>

The proposed project and cumulative development from the projects included in Table D-1, Appendix D, page A-94, would generate about 2,015 new peak-hour passengers which could be accommodated without exceeding peak-hour capacity.

#### f. SamTrans

There are currently 24 SamTrans buses leaving the downtown area during the afternoon peak hour. They operate at about 100% of seating capacity, corresponding to peak-hour ridership of about 1,200 passengers.<sup>13</sup> With a maximum capacity acceptable to the District of 125% of available seats, it is estimated that there is a reserve capacity for 300

passengers. The patronage from the proposed project and cumulative development (755 passengers) would exceed the available 300-passenger reserve capacity of SamTrans. The proposed project would add about five passengers of the trips generated by new development (see Table 2, page 31). No specific capacity improvements have been cited by the District; without added capacity, each peak-hour bus would have an average of about 30 standees.

#### 4. Parking

The proposed project would incur a total parking demand of about 150 spaces, calculated as follows:

1,110 daily office and retail work trips x 35% auto mode : 1.4 (auto occupancy) :  
2 trips per vehicle = 140± long-term spaces

790 daily non-work (office) trips x 10% auto : 1.4 (auto occupancy) : 2 trips per  
vehicle : 5.7 turnovers daily = 5± short-term spaces<sup>2</sup>

1,140 daily non-work commercial trips x 10% auto : 1.4 (auto occupancy) : 2  
trips per vehicle : 5.7 turnovers daily = 5± short term spaces

Based upon the above calculations, the addition of this parking demand would increase parking occupancy from about 92% to 95% in the area surveyed (see page 23 of this document). The proposed 101 Hayes project (81.540E) would displace an existing 65-space lot. Cumulative parking demand will also be generated by other approved projects in the vicinity of the proposed project. The parking displacement and additional parking demand by the United Nations Plaza building and the 1155 and 1170 Market office buildings (currently under construction), would probably result in 100% parking occupancy in the area of the proposed project. As parking occupancy approaches 100%, employees may chose to park further from their place of employment or shift to public transit or carpools as alternate modes of travel.

The proposed project would generate an average demand for one freight loading space per hour.<sup>14</sup> The project would provide one space accessible from Stevenson Street, which would meet the requirement of Section 152 of the City Planning Code and the recommendation made in City Planning Commission Resolution 9286.<sup>15</sup> The loading space, measuring 10 feet wide and 25 feet long, would not meet the recommended minimum dimensions (12' x 35') contained in Resolution 9286, of which the Planning Commission has pursued implementation as a matter of policy. Larger tractor-trailer



trucks would be unable to maneuver into the loading space due to the 28 foot (curb-to-curb) width of Stevenson Street.

#### 5. Pedestrian Flows

With no on-site parking, virtually all of the project's trips would involve some walking. The cumulative effect of other development would be a degradation from unimpeded to impeded pedestrian flows on the Market Street sidewalk during the peak hours.<sup>16</sup>

The proposed project's primary access would be on Market Street; pedestrian access would also be available on Stevenson Street. If one-half of the project's pedestrian travel occurred on the Market Street sidewalk during the peak hours exclusive of cumulative development, the existing pedestrian flows would increase by about 30%. With this increase, the pedestrian flows would remain within the unimpeded category.

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<sup>1</sup>San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, June 1980, revised October 1980.

<sup>2</sup>Caltrans, Eleventh Progress Report on Trip Ends Generation, July 1976, page 168.

<sup>3</sup>Institute of Transportation Engineers, Trip Generation, Virginia, 1979.

<sup>4</sup>Surveys of financial and retail travel characteristics by EIP Corporation, on file at OER, 450 McAllister Street.

<sup>5</sup>National Cooperative Highway Research Program, Urban Travel Patterns for Hospitals, Universities, Office Buildings and Capitals, Report No. 62, 1969.

<sup>6</sup>Scott MacCalden, Senior Engineer, Highway Operations Branch, Caltrans, telephone conversation, December 28, 1981.

<sup>7</sup>Municipal Railway, Municipal Railway Rehabilitation and Replacement Plans, May 20, 1982.

<sup>8</sup>John Stamas, BART Planner, personal communication, November 4, 1982.

<sup>9</sup>Ward Belding, BART Planner, telephone conversation, December 7, 1982.

<sup>10</sup>Alan Zahradnik, Golden Gate Transit Planner, telephone conversation, April 13, 1982.

<sup>11</sup>Gene Gardner, AC Transit Planner, telephone conversation, August 9, 1982.

- <sup>12</sup>Ben Chuck, Senior Transportation Planner, Caltrans, telephone conversation, August 9, 1982.
- <sup>13</sup>Gregory Kipp, SamTrans Planner, telephone conversation, August 9, 1982.
- <sup>14</sup>Wilbur Smith and Associates, Center City Pedestrian Circulation and Goods Movement Study, September 1980, page 73.
- <sup>15</sup>Guidelines adopted by San Francisco Planning Commission on January 21, 1982, described in Resolution No. 9286; guidelines based on findings in the San Francisco Center City Pedestrian Circulation and Goods Movement Study, September 1980, Wilbur Smith and Associates.
- <sup>16</sup>TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981 (EE81.25, Final Negative Declaration issued by San Francisco DCP, August 13, 1981). Updated to reflect the U.N.Plaza project (EE 79.133).



#### B. AIR QUALITY

The project would be a source of atmospheric emissions because of the vehicular traffic it would generate. On the local scale, carbon monoxide (CO) is the predominant pollutant emitted by motor vehicles because the CO standard is the air quality standard most often violated due to traffic on city streets. Projected CO concentrations for 1988 for the two intersections most heavily impacted by the project were calculated both with and without the proposed project. The calculations assume that other, cumulative planned and proposed projects in the downtown area would have been built. These results are shown in Table 5, page 40. The results represent the exposure a person would have at the worst curbside location during worst-case meteorological conditions. The highest concentration would occur during the p.m. peak hour, most likely on a winter evening.

These results indicated that no violations of state or federal CO air quality standards would occur as a result of the project or projected cumulative downtown development. Since CO concentrations drop off rapidly with distance from curbside, occupants of nearby buildings would be exposed to lower concentrations of CO than reported in Table 5.

Cumulative development would result in CO concentrations in 1988 which would be similar to 1982 levels without cumulative development. This is because ongoing state and federal emissions controls are expected to result in lower vehicular emissions rates in 1988 than in 1982, but the predicted additional traffic volumes in 1988 offset a portion of the expected gains from the "cleaner" cars.

The impact of the project on regional air quality would be due to the net increase in vehicle miles travelled (VMT) by project-related traffic which would total approximately 26,000 VMT daily. This would be about .03% of regional VMT and would not result in a measurable air quality impact.<sup>1</sup> The increase in cumulative total daily VMT due to cumulative downtown projects would be less than 0.1% of regional daily VMT.<sup>2</sup> This increase also would not result in a measurable air quality impact, though in a cumulative context, could increase ozone concentrations downwind and exceed regional ozone air quality standards. Neither the project nor other planned development in the project vicinity would conflict with the control strategies contained in the Bay Area Air Quality Plan.

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<sup>1</sup> Association of Bay Area Governments, 1982 Bay Area Air Quality Plan, Draft for Public Review, Berkeley, CA, July 1982.

<sup>2</sup> Total regional VMT in 1988 would be about 90,400,000. Total daily VMT due to cumulative development would be about 100,000.

TABLE 5  
PROJECTED CO CONCENTRATIONS AT CRITICAL INTERSECTIONS<sup>1</sup>  
parts per million (ppm)

<u>Intersection</u>	<u>Existing Conditions</u>		<u>1988 Without Project With Cum. Dev.</u>		<u>1988 With Project With Cum. Dev.</u>	
	<u>1-hour</u>	<u>8-hour</u>	<u>1-hour</u>	<u>8-hour</u>	<u>1-hour</u>	<u>8-hour</u>
Mission/8th Street	18.0	9.0	17.0	9.0	17.0	9.0
Market/8th Street	16.0	8.0	16.0	8.0	16.0	8.0

State 1-hour CO standard = 20 ppm  
Federal 8-hour CO standard = 9 ppm

<sup>1</sup> Calculations were made using the procedures recommended in California Air Resources Board, Research Division, Air Quality Modeling Section, Estimating Carbon Monoxide Concentrations for Hot Spots Analysis, Sacramento, CA, May 1980. The following assumptions were used:

- 1982 and 1988 emissions rates
- 1-hour average background at 7.0 ppm for 1982, 7.4 ppm for 1988
- 8-hour average background at 5.3 ppm for 1982, 5.7 ppm for 1988
- 10 mph average speed for peak hour
- 20 mph average route speed

Background concentrations are based upon one half the highest measured values in San Francisco in 1980-1981 and adjusted to account for regional pollution controls in accordance with the estimates contained in the 1982 Bay Area Air Quality Plan. The 1988 background values include an extra 35% to account for cumulative growth in traffic in the downtown area.



#### C. GROWTH INDUCEMENT

At full operation, the project would provide about 580 permanent jobs, including office, managerial, retail sales and maintenance positions. To the extent that the building is fully leased, and the availability of its space does not create permanent vacancies in other Bay Area office buildings, total employment in the Bay Area could additionally increase by about 595 permanent jobs through a multiplier effect.

The project would not require new construction or extension of public services or utility systems and would be built in an already developed urban area. Employee purchasing could stimulate employee-oriented retail activity in the proposed project area.

The project would represent an additional 0.6% of office space growth in downtown San Francisco. To the extent that the project would contribute to the attraction of new residents or commuters who otherwise would not have been attracted to San Francisco or the Bay Area, the demand for commercial, social and municipal services would be increased.

The proposed project would add about 108,200 net new gross square feet of office space to the site, which, together with other office development, could stimulate additional office growth in the vicinity on lots currently used for parking or occupied by low-rise structures containing business support services (particularly in the South of Market area). In economic terms, the land use succession process occurs because the "highest and best use" of the land is something other than the present use. "Highest and best" use is defined as that land use and land use intensity which will bring the highest price or rent, given current market conditions. The "highest and best use" is one that optimizes the allowable floor area, density and height permitted for the site, provided there is a market for the amount and type of space created.

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#### **IV. MITIGATION MEASURES WHICH WOULD MINIMIZE POTENTIAL PROJECT IMPACTS**

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In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been or would be adopted by the project sponsor or project architects and contractors, some may be implemented by public agencies. The City Planning Commission could require that some or all of these measures be included as conditions of project approval, if found to be warranted. Mitigation measures included as part of the Initial Study found in Appendix A, page A-1, have been incorporated below.

Each mitigation measure and its status is discussed below. Where a measure has not been included in the project, the reasons for this are discussed.

##### **A. TRANSPORTATION**

###### **MEASURES INCLUDED IN THE PROPOSED PROJECT**

1. The project would be subject to the development fee imposed under Ordinance No. 224-81 (if that fee is sustained) and whatever other lawful measures which may be adopted by the Board of Supervisors for the purpose of generating funds to provide for mitigation of the incremental peak-hour transit congestion attributable to the project upon completion.
2. The project sponsor would encourage transit use by employees in the proposed building by including the sale on-site of BART, Golden Gate Transit and Muni commute books and passes, and promoting an employee carpool/vanpool system in cooperation with RIDES for Bay Area Commuters, or other such enterprises.
3. The project sponsor would, in consultation with the Department of City Planning, request tenant firms to implement a flexible time system for employee working hours. The sponsor would (within a year of certification of occupancy being issued) report to the Department of City Planning on the success of such efforts.



4. Within a year from completion of the project, the project sponsor would conduct a survey in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants, and actual pick-up and drop-off areas for carpoolers and vanpoolers. This survey would be made available to the Department of City Planning. Alternatively, at the request of the Department of City Planning, the project sponsor would provide an equitable in-lieu contribution for an overall survey of the downtown area to be conducted by the City.
5. The project sponsor would participate in any future areawide study of current parking conditions and future needs. If new short-term (or long-term) parking is appropriate in the downtown area, the project sponsor would participate in the equitable funding of such facilities through a special assessment district according to criteria determined by the study.
6. The project sponsor would ensure that safe and convenient pedestrian access be maintained throughout the construction period on designated walkways around the project site.
7. The project sponsor would require as part of the general construction contract that no vehicular construction traffic enter or leave the project site before 9:00 a.m. or after 4:00 p.m. to minimize conflicts with peak-hour traffic.
8. The project sponsor would coordinate street excavation with construction contractors on any concurrent nearby projects to minimize cumulative traffic impacts.
9. The project contractor would provide off-street parking for construction workers on the project site, or at an off-site location with jitney service to the site (if the site is so removed as to require jitney service).
10. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering and with the Office of Environmental Review to determine other feasible construction traffic mitigation measures satisfactory to all parties.

11. Eyebolts to support future Muni electrification wires would be incorporated into the project.
12. The project sponsor would provide building directories and visual aids indicating the location of the elevators in the lobby area of the building.

## B. VISUAL QUALITY AND URBAN DESIGN

### MEASURES INCLUDED IN THE PROPOSED PROJECT

The proposed Market Street building wall setback at 85 feet height would create visual continuity between the project and other buildings in the area, including the Civic Center buildings, Orpheum Theater, the Bay Heritage Financial Building and Odd Fellows Temple. The height and spacing of the building columns would be similar to those of the Federal Office Building and allow light and shadow to be cast against the Market Street face of the structure, increasing visual interest. The concrete exterior of the structure would be light grey in color, similar to the Federal Office Building.

## C. HOUSING

### MEASURES INCLUDED IN THE PROPOSED PROJECT

Since publication of the Initial Study for the project (January 28, 1982), it has been determined that the existing Civic Center Market building on the project site contained approximately 29,000 gross square feet of office space. Therefore, the project site would contain a net addition of approximately 108,000 gross square feet of office space. The City Planning Commission's Office Housing Production Program (OHPP) guidelines calculate the project-related housing demand based upon net new gross square feet of office space. Therefore, the revised housing requirement for the project is 96 units.<sup>1</sup> This represents a reduction of 27 housing units that would be required to accommodate the project-related increase in housing demand. The project sponsor would fully mitigate the housing demand of 96 housing units generated by the proposed project. To date, 91 units have been accepted by the City to meet a portion of the demand.<sup>2</sup> The remaining 5-unit demand would be provided by the project sponsor through one of the following: (1) new construction of dwelling units; (2) rehabilitation of vacant residential units as accepted by the City; (3) monetary contribution in the City's Mortgage Bond Revenue Program.

## D. SOILS, GEOLOGY

### MEASURES INCLUDED IN THE PROPOSED PROJECT

1. Project excavation would be above the water table. During construction the pit would be shored where necessary to prevent slumping.
2. The building would meet the requirements of the San Francisco Building Code for seismic design concerning the amount of allowable sway, the attachment of partitions and decorative elements, and the provision of emergency electricity and water services.
3. Further geotechnical engineering investigations of the site would be done to determine soil characteristics; to recommend foundation pile type, pile bearing length and pile tip elevation; and to predict expected settlement and possible differential settlement. Results and conclusions of these technical studies would be incorporated into the structural plans for the proposed building and all design recommendations by a licensed geotechnical engineer would be adhered to.

## E. AIR QUALITY

### MEASURES INCLUDED IN THE PROPOSED PROJECT

1. Those measures which would reduce vehicular traffic also would reduce air quality emissions impacts. These measures are described in part IV.A., page 42.
2. An effective watering program (complete coverage twice daily) can reduce construction dust emissions by about 50%. The project sponsor would require the contractor to implement a twice-daily watering program, which would reduce the likelihood of airborne construction dust and particulates exceeding state and federal standards.
3. Construction contractors would maintain and operate construction equipment to minimize exhaust emissions.
4. Contractors would be required to cover the loads of trucks carrying excavated materials from the site in order to reduce dust and potential spillage onto streets.



## F. HAZARDS

### MEASURES INCLUDED IN THE PROPOSED PROJECT

An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building permits.

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<sup>1</sup>San Francisco Department of City Planning, Revised Guidelines for Administering the Housing Requirements Placed on Office Development under OHPP, December 7, 1981, page 5.

<sup>2</sup>Letter from Dean Macris, Director of Planning, to Trinity Properties, February 25, 1982.

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## **V. UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED**

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This chapter covers impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or other mitigation measures that could be implemented, as described in Chapter IV, Mitigation Measures, pages 42 through 46.

### **A. CUMULATIVE OFFICE DEVELOPMENT**

The project would be part of a trend of denser development in Downtown San Francisco and in the South of Market area. Cumulative increases in the amount of office space would continue regional growth in service-sector and office headquarters activities and employment. The project would contribute to cumulative traffic increases Downtown and cumulative increases in passenger loadings on BART, Muni and other transit agencies.

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## VI. ALTERNATIVES TO THE PROPOSED PROJECT

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### A. ALTERNATIVE I: NO-PROJECT

Under the no-project alternative, the Civic Center Market building would remain on the site as it currently exists and the proposed project would not be constructed. Under this alternative, none of the effects identified in this EIR would occur and the visual characteristics of the site would remain the same. There would be no changes to pedestrian flow, no increase in transit ridership and no increase in parking demand for office space. Under the no-project alternative, there would be no demolition and the existing building would remain vacant. The site would be left open for future development proposals consisting of design details different from those currently proposed.

Retaining the project site as it presently exists would preclude economic development of the project site; the existing building would continue to deteriorate, and could become a safety and health hazard to pedestrians. The site would continue to be underutilized in terms of the 10:1 Floor Area Ratio (FAR); the existing structure has a FAR of 3.

The project sponsor rejected this alternative because none of the objectives of the project sponsor would be met. This alternative underutilizes scarce land resources in the downtown area. It is spatially wasteful in that the current floor area of the present structure on the site is approximately 30% of the proposed project's floor area and the building is vacant. The provision of office and retail space in the downtown area is a goal of the Commerce and Industry Element of the Comprehensive Plan: to improve San Francisco's position as a prime regional location for specialized retail trade; to encourage shopper accessibility to the area and physical design amenities at a pedestrian scale; and to avoid displacement of other viable uses in other areas of San Francisco.



## B. ALTERNATIVE 2: REDUCED BUILDING HEIGHT

Although the proposed project would not require a variance or other special authorization under the City Planning Code, this alternative would consist of a structure lower in height than the 189-foot, six-inch building currently proposed, and of simple, rectangular configuration. The advantage of this alternative, while maintaining the maximum permitted 145,200 gross square feet of floor area, would be to simplify the building's structural framing and incrementally reduce building construction costs.

The building would be ten stories tall, about 140 feet high to the roofline. This alternative would create a building more rectangular in vertical form than the project as proposed. Such a structure would appear bulkier than the proposed project, contain less visual interest and would increase shadows in the area because there would be no setbacks at the upper floors.

From a visual standpoint, removing the stepped back upper floors would reduce the number of open-air balconies suitable for potted plant materials as decorative elements, and from a design standpoint would weaken a definition of the building's mid-section. Reducing the height of the building's base proportionately to the reduction of the structure's mid-section would serve to retain a scale relationship between these two portions of the structure, but the lower base would not relate to the height of the Civic Center buildings or federal office building at the United Nations Plaza. Under this alternative, cumulative air quality, transportation and growth-inducing impacts would remain the same for the building as proposed.

The project sponsor and project architects rejected this alternative in favor of the proposed project design because of the adverse visual, urban design and shadow impacts this alternative would create as noted above. Alternative building designs prepared by the project architects included schematic designs generally addressing details in the exterior shape of the building, height, window placement, exterior building materials and the location of pedestrian access points. In the opinion of the project architects and sponsor, the selected design for the proposed project represents a combination of the above features that are most aesthetically appropriate to the setting and the arrangement of internal building spaces and use functions of greatest efficiency.

### C. ALTERNATIVE 3: ON-SITE HOUSING

This alternative would include housing on the project site along with office use to create a mixed-use development. The project as proposed would create a demand for 96 housing units in San Francisco (see Section IV.C., Mitigation, Housing, page 44).

Incorporating 96 units into the project would cause the proposed building to exceed the 10:1 floor area ratio of 145,200 square feet. Therefore, in order to accommodate the required housing on-site within the floor area ratio limitation, it would be necessary to reduce the amount of office space in the project, thereby reducing the number of office employees and required housing units.

Allowing for 91,000 gross square feet of office space while retaining the proposed 8,000 gross square feet of retail space would generate a demand for 55 housing units which could be accommodated on the site at about 840 gross square feet average each. Required parking would be about 14 spaces<sup>1</sup> and would be accommodated in a second basement level, as added to the basement level currently proposed for utilities and storage. Under this alternative, there would be no need to increase the 189-foot six-inch building height as proposed because the gross square footage of the structure would remain the same. Therefore, shadows cast by the structure would remain the same.

Average daily traffic on adjacent streets resulting from the project as proposed would be reduced about 20% while project-generated peak-hour traffic would be reduced about 25%. Peak-hour traffic travel patterns of residents would be in opposite directions from office employee travel patterns. Dust generation and noise during construction would be greater than the proposed project because excavation to a greater depth would be necessary to accommodate residential parking.

This alternative was rejected by the project sponsor because: (1) an additional bank of elevators would be required to serve the housing, creating two elevator banks (one for office use and one for housing); and (2) reducing interior square footages and increasing housing and office leasing costs would ultimately reduce sales and leasing potential. Also, separate plumbing and energy systems would be required (one for office use and one for housing), necessitating additional mechanical space and increasing costs while reducing leasable floor area. Excavating two basement levels may prove to be difficult because of the proximity of the BART tunnel.

#### D. ALTERNATIVE 4: GUIDING DOWNTOWN DEVELOPMENT (GDD)

The Department of City Planning initially released Guiding Downtown Development (GDD)<sup>2</sup> in May of 1981. The document contains a series of regulatory proposals for managing development in downtown San Francisco. The proposals concern the size, design, and location of major buildings and address the impacts new development could have on housing, transportation, open space, architecturally significant older buildings, and the general environment and livability of the central business district. Since publication of the Initial Study, (January 28, 1982), a revised version of GDD was issued in July 1982 that contained revisions to the proposed height map, bulk controls, the modification of off-street loading requirements, new rules to improve rooftop appearance, and other items relating to parking controls and changes in C-3 zoning boundaries. For the project site area, GDD recommendations include a maximum base Floor Area Ratio (FAR) of 8:1, a maximum building height of 120 feet, that artwork be incorporated in or adjacent to the project, that retail use be provided on the ground floor, and that public recreation and open space be provided at the ratio of one square foot for each 30 gross square feet of building floor area.

##### a. Office Use

The building would be located in a proposed 120-foot height district. The next adjacent height district (adjacent to the rear of the building along Jessie Street) would be 180 feet. Under the provisions of Guiding Downtown Development, the structure would be permitted to exceed the height of the district in which it would be located, not exceeding the height limit of the adjacent district according to a specified formula. For the proposed project, therefore, the maximum permitted height would be about 170 feet, about 19 feet lower than the roofline height of the structure as proposed. Currently, the only major exception to height limits is for rooftop mechanical equipment. It is proposed that mechanical equipment, penthouse space and/or recreation and open space be allowed above the height limit, and without being counted against allowable FAR, provided that it is within the area formed by planes sloping inward at a 50 degree angle from the outer edge of the roof.

GDD calls for a maximum base FAR of 8:1 (page 4) in the C-3-G zone. A 8:1 FAR would yield a structure containing 116,160 gross square feet, 29,040 gross square feet less than the proposed project. The proposed 8,000 square feet of ground floor commercial space would not count against the allowable FAR if each establishment does not exceed 2,000



square feet. The 8,000 gross square feet of retail space would then be added to the 116,160 gross square feet permitted on the site under the 8:1 FAR to create a total of 124,160 gross square feet in the building, which yields an effective FAR of about 8.5:1. The building would contain about 1½ fewer floors than the proposed 13-story project. The mechanical penthouse on the roof of the structure would be set inward from the edge of the roof within the 50 degree angle from the sides of the building (currently, the proposed penthouse roofline steps back within the 50 degree angle on the Market Street and Jesse Street sides of the building, and would be flush with the building's exterior wall on the east and west sides).

About 4,100 gross square feet of public open space would be required by GDD under this alternative. To accomplish this, either the balconies at each of the building's upper levels would have to be opened to the public, or a galleria provided on the ground floor coinciding with the proposed retail space. Art works, as required by GDD, could be incorporated in the galleria.

The impacts of the smaller structure would be similar to but reduced from the proposed project since the alternative would have 14% less floor space than the proposed project. Accordingly, there would be less traffic generated as a result of the project and there would be proportionately fewer impacts on transportation services, parking facilities and the street network, because there would be fewer employees in the building. There would be less energy consumed to construct and operate the building, and there would be less demand (about 19 units) for housing than the project as proposed. A shorter building would not preclude designing building setbacks at upper floors beginning at the 85-foot level; however, there would be fewer setbacks in order to accommodate a 124,160 gross square foot structure within the 170 foot height limit, and shadow impacts would be greater than the project as proposed. A shorter structure would more closely approximate the 11-story height of the 1155 Market Street building currently under construction on the adjacent lot west of the project site.

This alternative was rejected by the project sponsor because the building would appear to be bulkier than the structure as proposed, effectively increasing perceived building height and mass. Shadow impacts would be increased and the project site would continue to be underutilized with respect to the maximum permitted FAR of 10:1.

## b. Mixed-Use

Under GDD, development of new office buildings would be required to also provide housing to mitigate the impact of new office building employees on the existing housing supply (see Section IV. Mitigation, page 51). In order to create an incentive for development of mixed office/residential projects in the downtown, additional FAR would be allowed for residential uses incorporated in the project. The additional FAR in the C-3-G District would be 4.0 for a total FAR of 12.0:1.

The project as proposed would create a need for 96 housing units in San Francisco. However, in keeping with the allowable 116,160 gross square feet of office space under the proposed 8:1 FAR of Guiding Downtown Development, the project would create a need for 77 dwelling units. The total FAR and gross square footage would be as follows:

<u>USE</u>	<u>GDD FAR</u>	<u>Gross Square Feet</u>
Office	8.0:1	116,160
Commercial	*0.5:1 (proposed)	*8,000
Housing	<u>4.0:1</u>	<u>58,080</u>
	12.55:1	182,240

\* FAR would vary with lot size; 8,000 square feet is proposed for the project.

Seventy-seven dwelling units could be accommodated on the site at an average of about 754 gross square feet each. This alternative would require 20 parking spaces which could be accommodated in a second basement level,<sup>1</sup> in addition to the basement level currently proposed for utilities and storage. The total gross square footage could be accommodated in a 13- floor structure, which would rise 169 feet, allowing 13 vertical feet for each floor. This would be within the overall 170 foot height permitted by Guiding Downtown Development. About 4,100 gross square feet of public open space would be required by GDD under this alternative. This could be accommodated through a view and sun terrace on the roof, and a galleria provided on the ground floor coinciding with the proposed retail space. Art works could be incorporated in the galleria as required by GDD.

Because the total square footage of the building would be greater than the project as proposed, there would be no stepping back of the building at upper floors in order to remain within the height limit and there would be greater shadow impacts on the United Nations Plaza during the daytime. From a visual standpoint, absence of the stepped back

upper floors would eliminate the potential for open-air balconies suitable for potted plant materials as decorative elements, and from a design standpoint would weaken a definition of the building's mid-section.

Average daily traffic on adjacent streets resulting from the project as proposed would be reduced about 15% while project-generated peak-hour traffic would be reduced about 20%. Peak-hour traffic travel patterns of residents would be in opposite directions from office employee travel patterns. Dust generation and noise during construction would be greater than the proposed project because excavation to a greater depth would be necessary to accommodate residential parking.

This alternative was rejected by the project sponsor because: (1) an additional bank of elevators would be required to serve the housing, creating two elevator banks (one for office use and one for housing); and (2) separate plumbing and energy systems would be required (one for office use and one for housing), necessitating additional mechanical space and increasing costs while reducing leasable floor area. Excavating two basement levels may prove to be difficult because of the proximity of the BART tunnel. The project sponsor felt the structure would cast shadows on the United Nations Plaza due to the absence of setbacks at upper floors and the building would appear to be greater in mass and scale than the proposed project, and lack a visual relation in scale and height to the Civic Center buildings and federal office building at the United Nations Plaza.

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<sup>1</sup>Current zoning in the C-3 districts requires one off-street parking space for every four dwelling units.

<sup>2</sup>Resolution 8982 (adopted by the City Planning Commission, June 4, 1981) requires an alternative building proposal that would comply with the proposed controls contained in Guiding Downtown Development.



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---

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Amerisport International NV  
c/o Courdert Brothers  
3 Embarcadero Center #1060  
San Francisco, CA 94111

Holtz, Max, Mary and Rose  
2940 Tice Creek Road  
Walnut Creek, CA 94595



(415) 558-5261

APPENDIX A  
NOTICE THAT AN  
ENVIRONMENTAL IMPACT REPORT  
IS DETERMINED TO BE REQUIRED

Date of this Notice:

December 3, 1982

Lead Agency: City and County of San Francisco, Department of City Planning  
450 McAllister St. - 5th Floor, San Francisco CA 94102

Agency Contact Person: Diane Oshima

Tel: (415) 558-5261

Project Title: 81.549ED  
Office Building

Project Sponsor: Trinity Properties

Project Contact Person: Backen Arrigone  
& Ross Architects / Michael Chait

Project Address: 1145 Market Street

Assessor's Block(s) and Lot(s): 3702/44,44A

City and County: San Francisco

Project Description: Construct a 13-story (190 ft.) office and retail building containing approximately 145,200 gross square feet (137,500 gross sq. ft. office), requiring demolition of existing structure.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Initial Evaluation (initial study) for the project, which is on file at the Department of City Planning:

An initial study for the proposed project was completed, leading to the publication of a Preliminary Negative Declaration on May 21, 1982. An appeal to this determination was filed with the Department on June 1, 1982. On September 2, 1982, the City Planning Commission determined that the proposed project may have significant environmental impacts and that an Environmental Impact Report (EIR) was required.

The initial study will be revised in accordance with the Commission's action and will be included in a focussed EIR, which will provide further impact analysis in the following areas: 1) Growth-inducing impacts; 2) Cumulative transportation impacts; and 3) Cumulative air quality impacts.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: Not Applicable

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a \$35.00 filing fee.

Alec S. Bash, Environmental Review Officer

A-1





## NEGATIVE DECLARATION

Date of Publication of Preliminary Negative Declaration: May 21, 1982	
Lead Agency: City and County of San Francisco, Department of City Planning, 450 McAllister Street, San Francisco 94102 Agency Contact Person: Diane Oshima Tel: (415) 552-1134	
Project Title: 81.549E: Office Building	Project Sponsor: Trinity Properties Project Contact Person: Jim Mitchell (Backen, Arrigoni & Ross Architects)
Project Address: 1145 Market Street Assessor's Block(s) and Lot(s): Assessor's Block 3702, Lots 44, 44A City and County: San Francisco	
Project Description: Construction of a 13-story, 145,000 square foot office building, containing 4,000 square feet of retail space, providing no off-street parking, requiring demolition of an existing four-story structure, requiring Discretionary Review.	
THIS PROJECT COULD NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached:  PLEASE SEE ATTACHED	
Mitigation measures, if any, included in this project to avoid potentially significant effects: PLEASE SEE ATTACHED	

Final Negative Declaration adopted and issued on \_\_\_\_\_

cc: Jim Mitchell  
Neighborhood Organizations  
Abutting Property Owners  
Lu Blazej  
Richard Hedman  
Dean Macris  
Robert Passmore  
100 Larkin Bulletin Board  
Trinity Properties

\_\_\_\_\_  
Alec Bash, Environmental Review Officer





## I. PROJECT DESCRIPTION AND SETTING

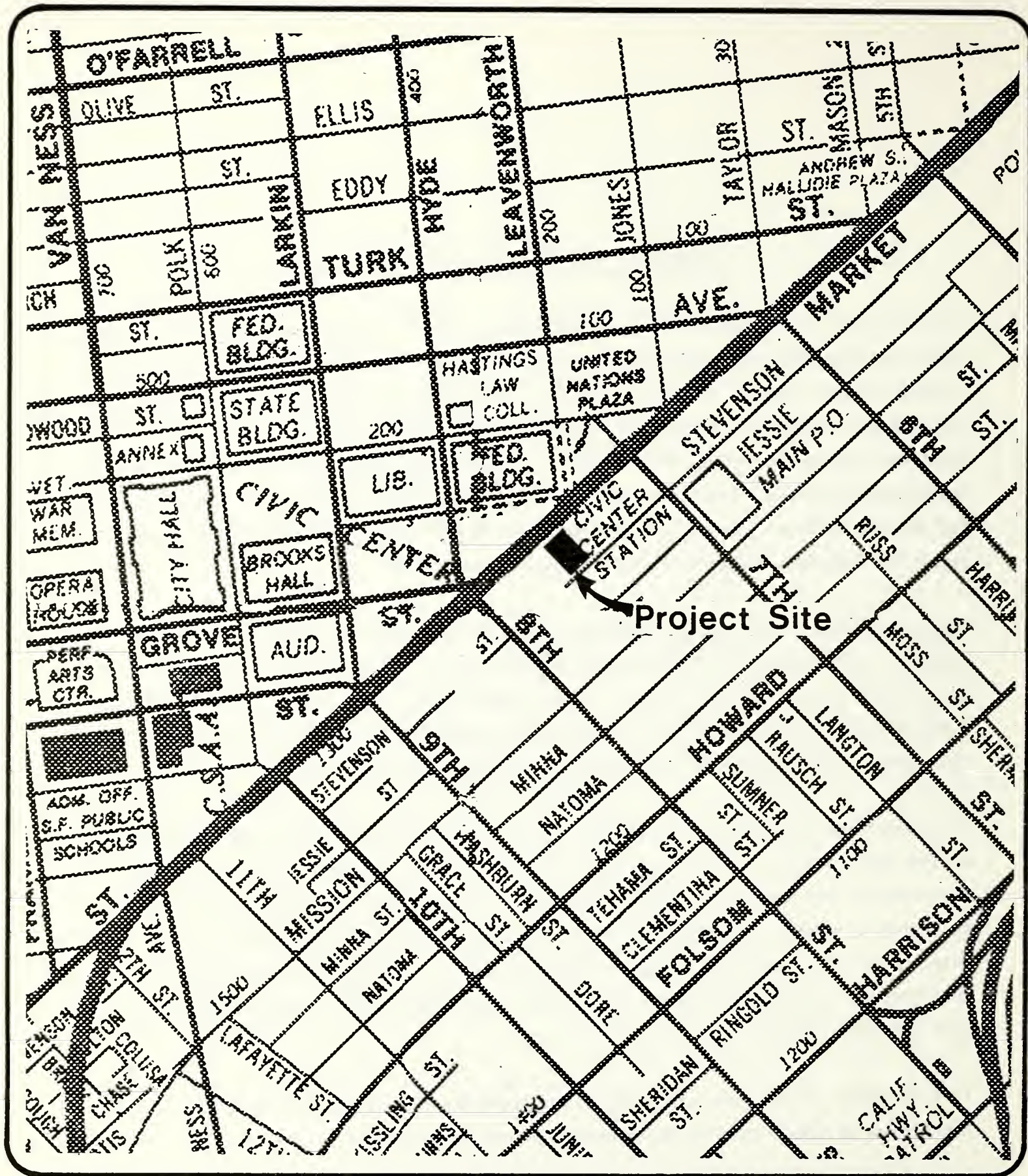
The proposed project would be an office building located on the south side of Market Street between Seventh and Eighth Streets on Assessors Block 3702, Lots 44-44A (Figures 1 and 2, pages 2 and 3). The structure would contain 13 floors, and have a basement for utilities and mechanical equipment (Figures 3 and 4, pages 4 and 5). The ground floor would be devoted to retail space (Figure 5, page 6) with about 8,000 gross square feet devoted to retail use. Total gross square footage contained within the structure would be 145,200 square feet. The project site measures 88 feet along the Market Street frontage and is 165 feet deep containing a total of 14,520 square feet.

The project site is in a C-3-G (Downtown General Commercial) zoning district (Figure 6, page 7). A maximum Floor Area Ratio (FAR) of 10 to 1 is permitted in this district by Section 124 of the Planning Code. On the project site, the maximum permitted gross floor area is 145,200 square feet. Because the proposed project would have a total gross floor area of 145,200 square feet, the project would have an FAR of 10:1.

The height and bulk district for the site is 240-G. This allows a maximum building height of 240 feet, with a maximum building length of 170 feet and a maximum diagonal dimension of 200 feet above a height of 80 feet. The proposed building would be 189 feet, six inches in height to the roofline, have a maximum length of 165 feet and a maximum diagonal dimension of 188 feet above a height of 80 feet. A mechanical penthouse housing the elevator machinery, cooling towers, boiler and emergency generator would rise 26 feet above the roofline.

Offices above ground floor retail use as proposed would be consistent with C-3-G zoning and similar to uses in existing and approved nearby development.

The ground floor retail space, building lobby and elevators would be accessible via a central pedestrian passageway extending from the Market Street side of the building through to Stevenson Street which abuts the south side of the structure. A loading dock



## Site Location Map

Basic map reproduced by permission of the California State Automobile Association, copyright owner.

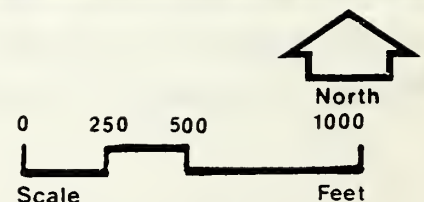
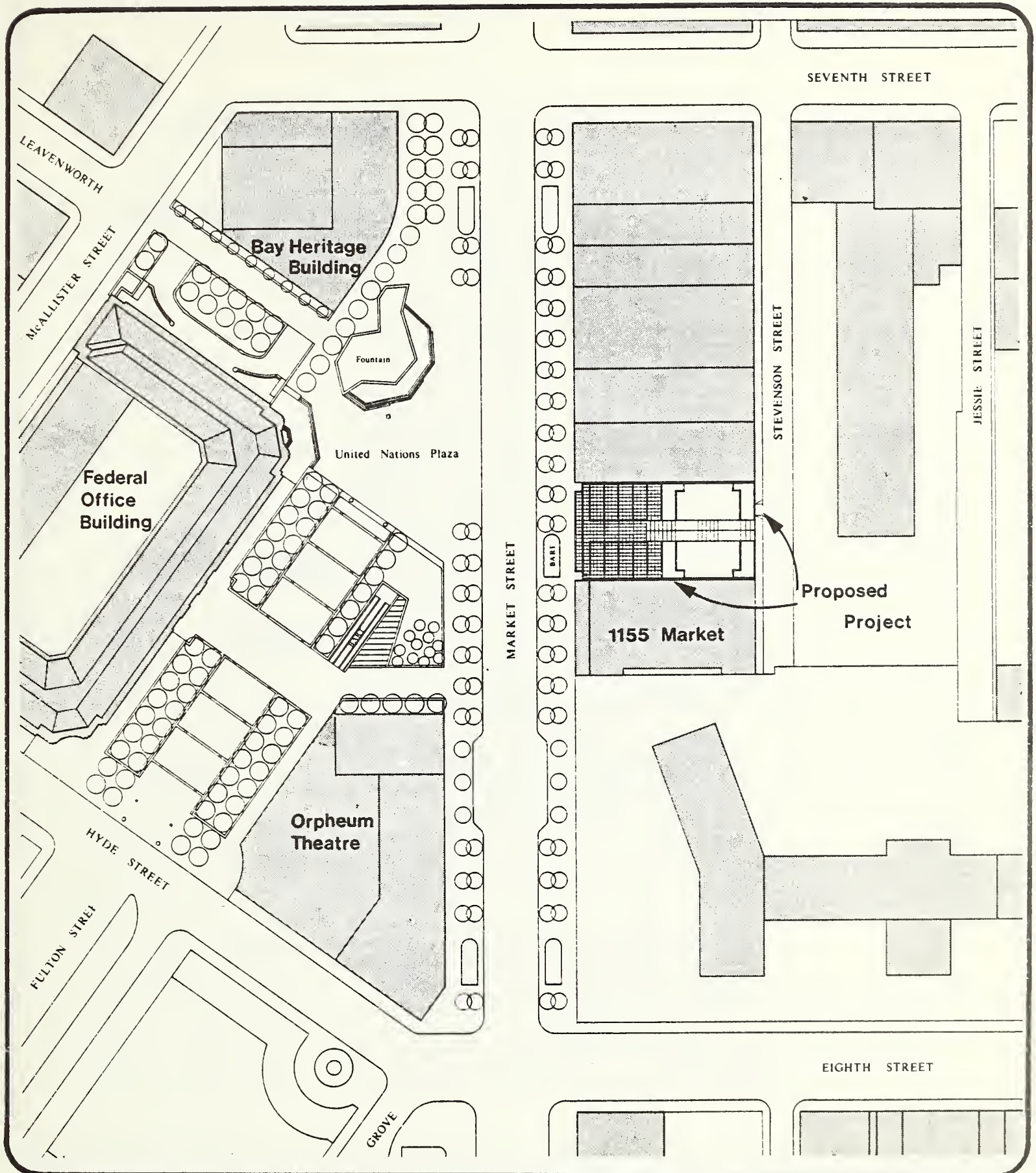


Figure No.1





## Project Location Map

SOURCE: Backen, Arrigoni and Ross, Architects

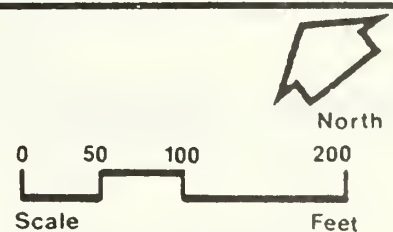
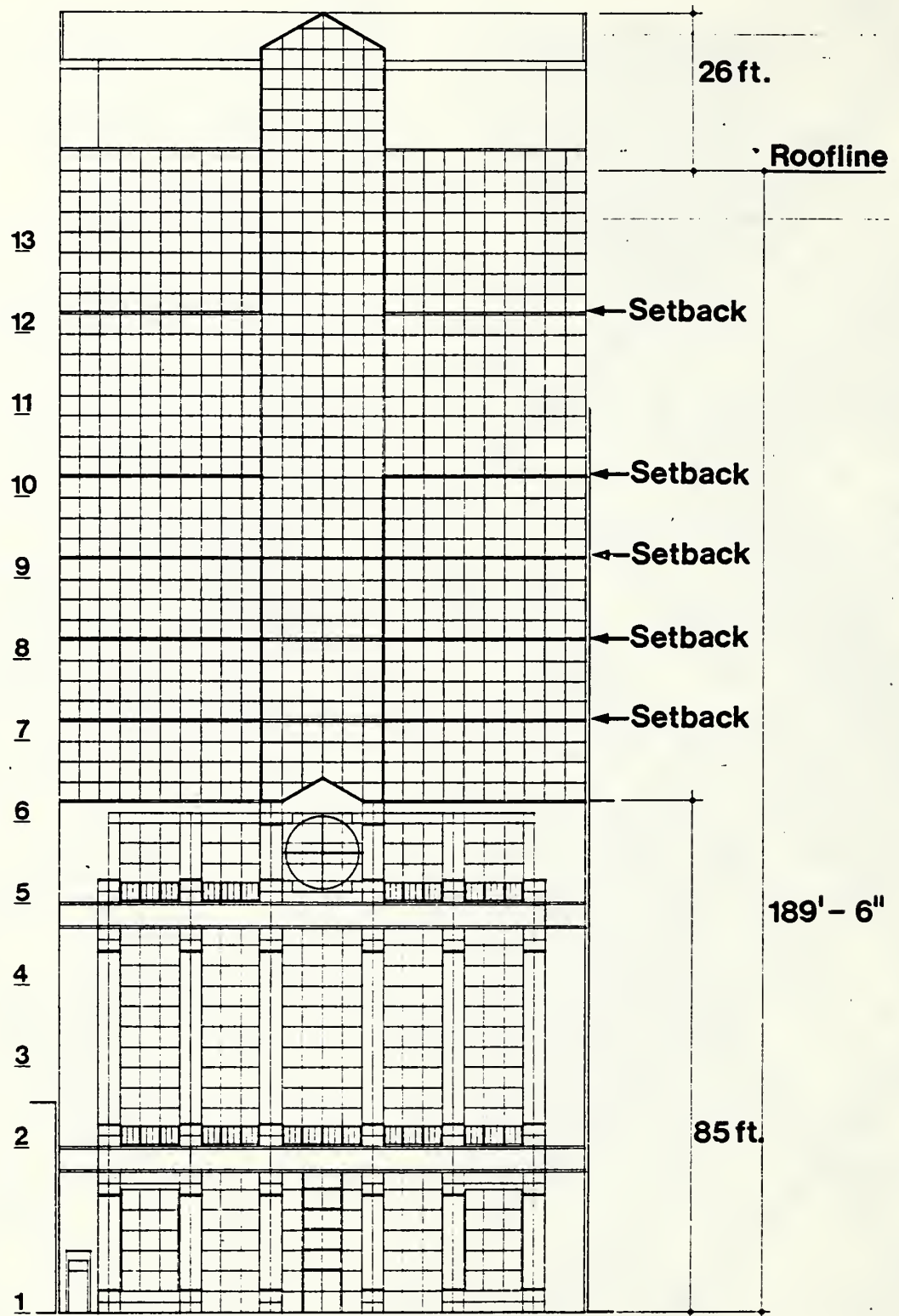


Figure No.2

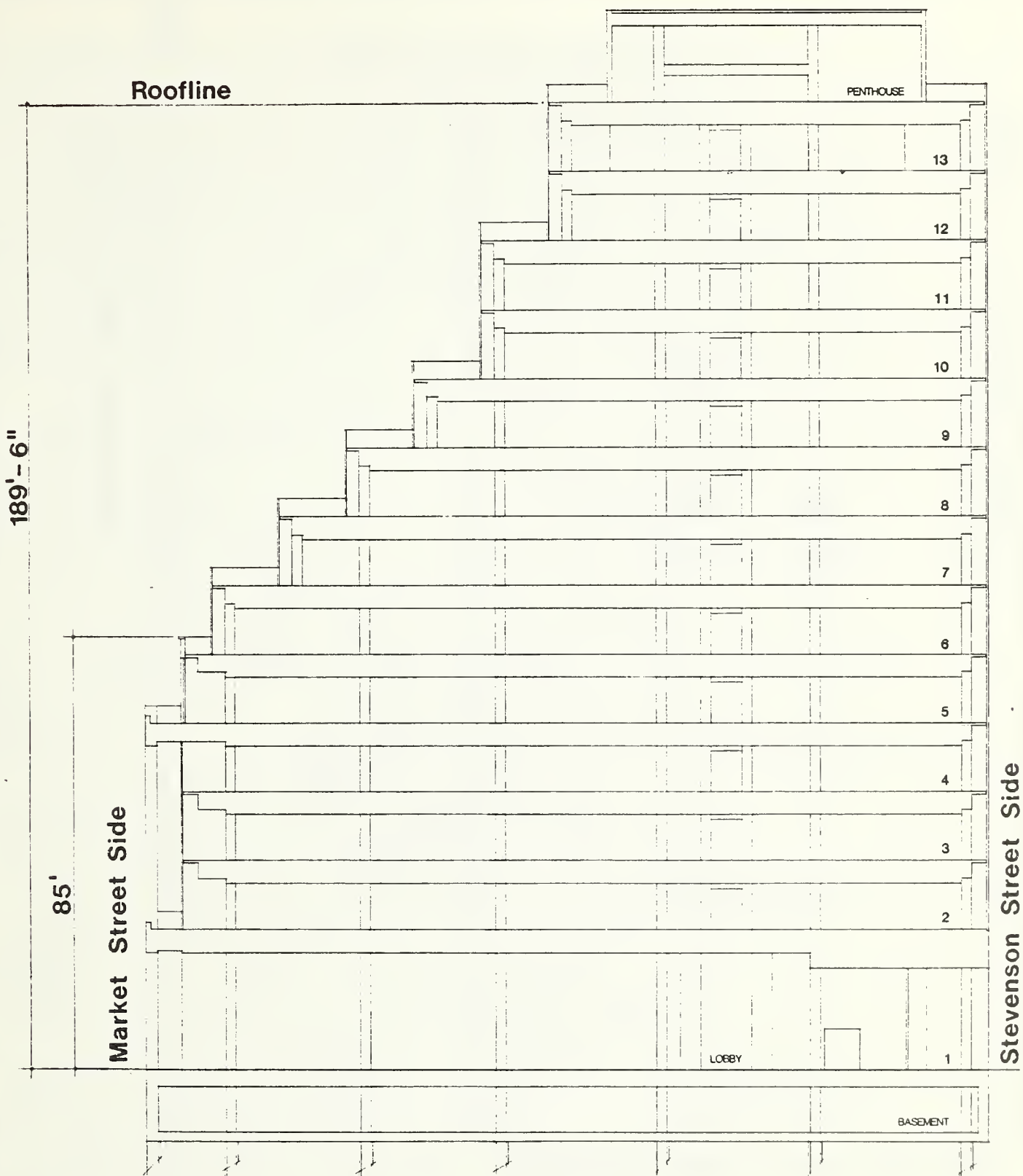




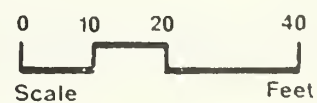
## Market Street Facade

SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 3



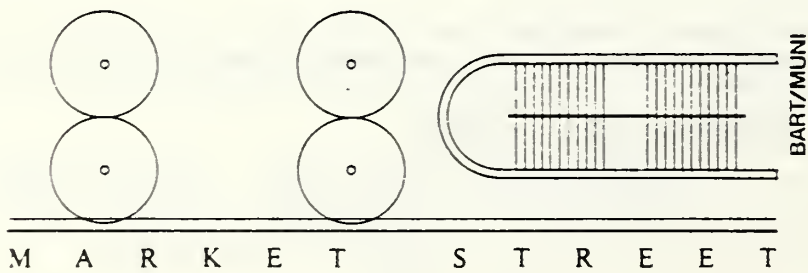
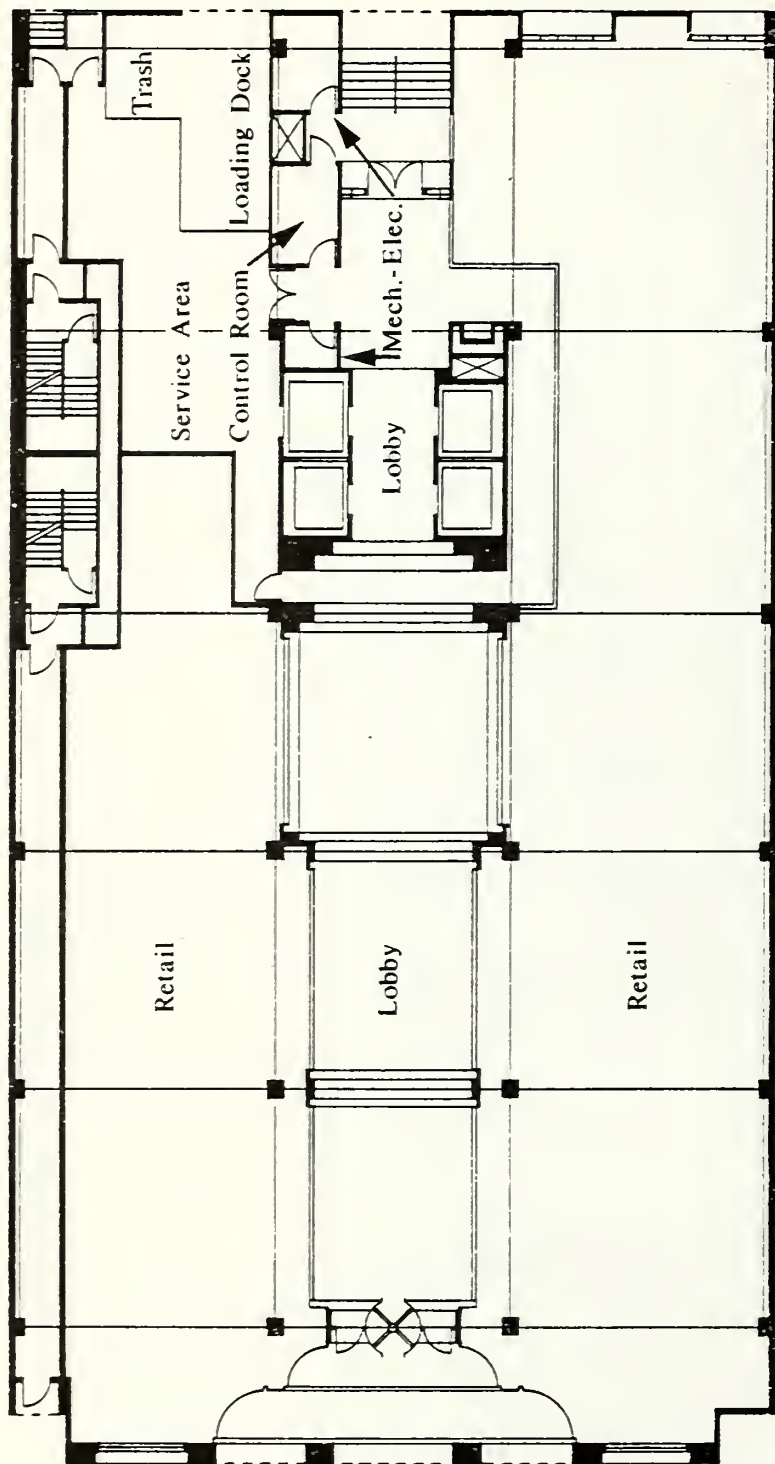
## Building Section Looking East



SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 4

S T E V E N S O N S T R E E T



# Street Level Plan

SOURCE: Backen, Arrigoni and Ross, Architects

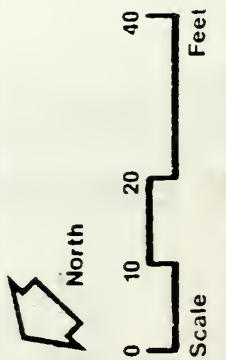
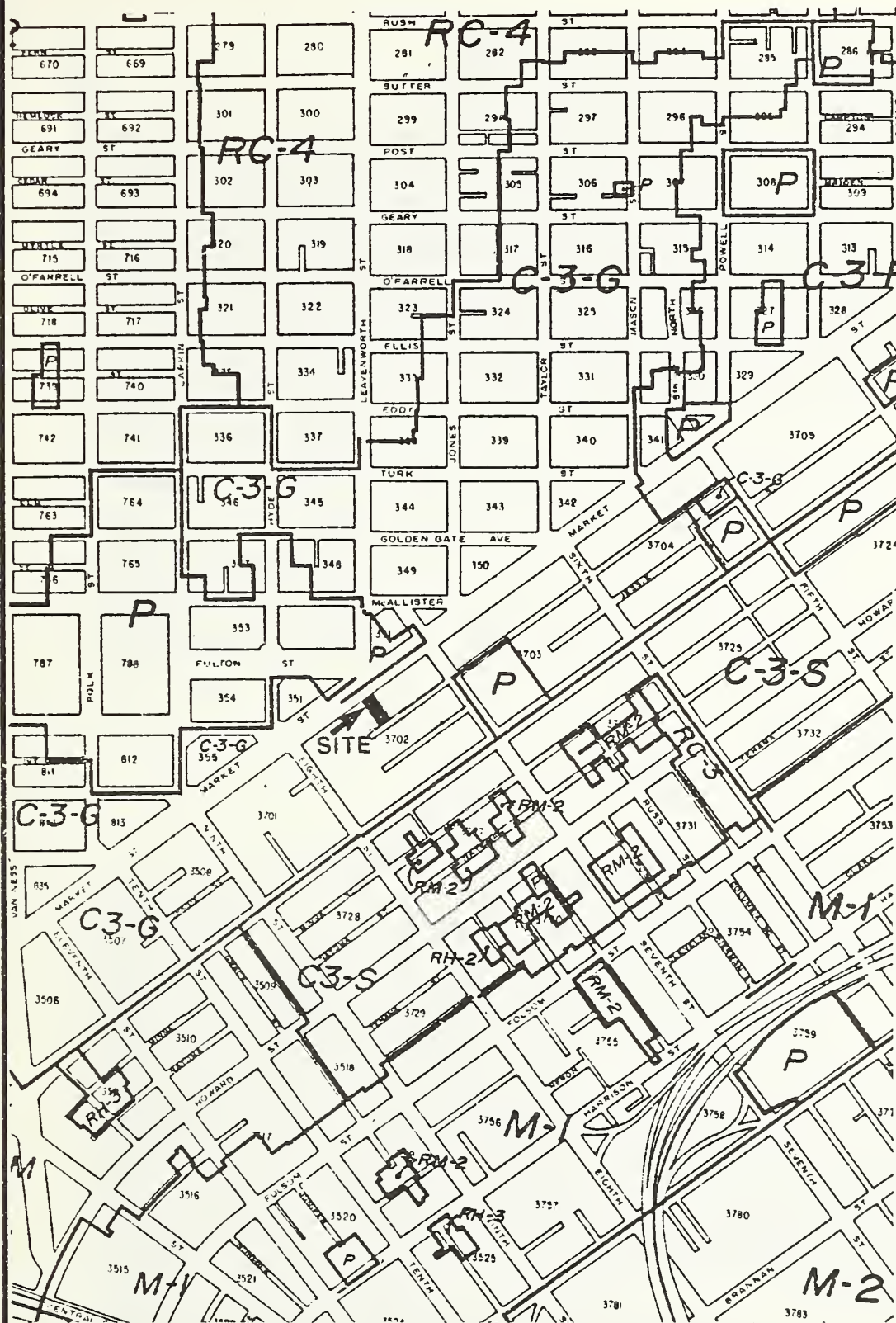


Figure No. 5





**LEGEND:**

House Character  
Districts -  
RH-2, RH-3

Mixed House and  
Apartment Character  
Districts -  
RM-2

Residential-  
Commercial  
Combined Districts -  
RC-4

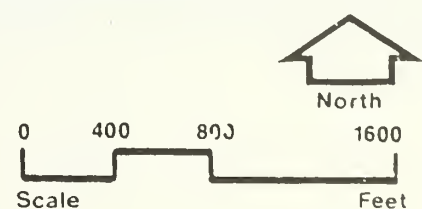
Commercial Districts -  
C-3-G, C-3-S

Industrial  
Districts - M-1,  
M-2

Public District - P

## Zoning Map

SOURCE: City & County of San Francisco



**Figure No.6**

and trash bin area would be located at the rear of the building on the ground floor accessible from Stevenson Street. No short- or long-term parking would be provided by the project.

The structure would be set back 45 feet from Market Street at the 85-foot height level, and floors above that level would be progressively stepped back. An open-air balcony containing potted trees, shrubs and vines would be provided at each stepped level. The structure would be constructed on pilings for support due to existing soil characteristics, would be framed in steel, and would contain light-grey concrete exterior building walls with clear glass windows below the 85-foot level. The levels stepped inward from Market Street above the 85-foot level would contain clear glass window panes set into a grid pattern of white, enameled frames. The objective of the project architects, Backen, Arrigoni and Ross, is to design a light-colored building which is crystalline in appearance, and which visually relates to the scale, bulk and proportions of buildings in the project area. The building would include design detailing and coloring that would reflect the design and coloring of the Civic Center buildings and Federal Office Building adjacent to the United Nations Plaza on the north side of Market Street opposite the project site.

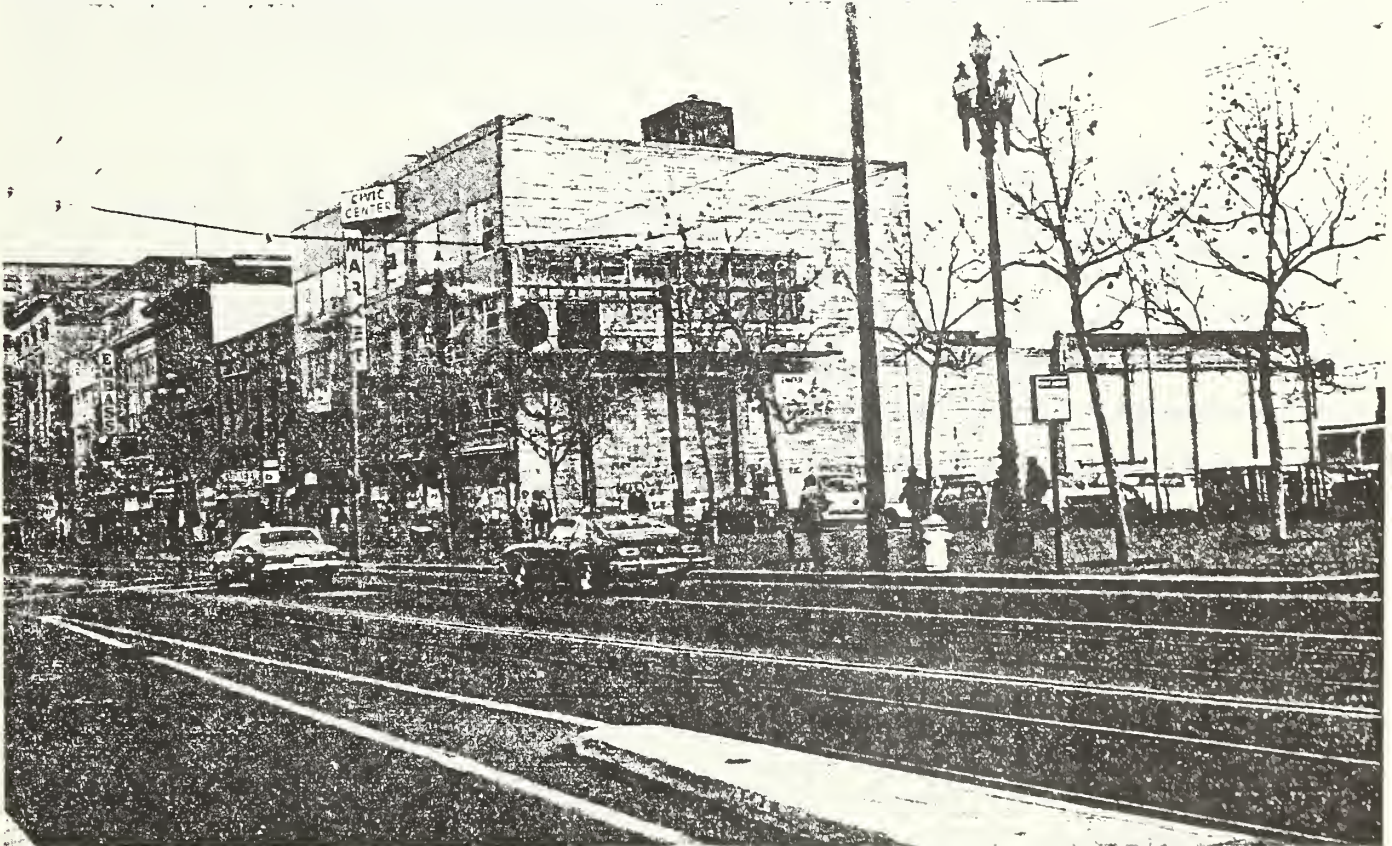
The proposed project would require demolition of the 4-story, 72,000 square foot Civic Center Market building on the project site that is vacant except for a delicatessen/grocery and restaurant on the ground floor (Figure 7, page 9). About 560 persons would be employed in the proposed project. Estimated project construction costs are about \$10,000,000. Construction would be expected to begin in mid- to late- 1982 and initial occupancies would be expected to occur in late-1983. The project sponsor is Trinity Properties, Inc., with offices in San Francisco.

The project site is generally within the Civic Center area, about 1 to 2 blocks away from Civic Center buildings. Buildings east of the site are devoted to office use with ground-floor retail, restaurants, the Embassy and Strand Theaters and the National Hotel, which offers daily, monthly and weekly rates. To the south is the Greyhound Bus Terminal and the Odeon, a residential hotel. The Trinity Apartments and Greyhound Bus Terminal occupy most of the block. Most terminal activities occur in the building on Seventh Street while the area bordering the south portion of the project site is used for bus parking.





View south of project site from United Nations Plaza.



View southeast of project site from north side of Market Street.

## Project Area Photographs

SOURCE: EIP Corp.

Figure No.7



The site is bounded on the west by the 1155 Market Street office building project, an 11-story, 144,580-square foot structure with retail rental space and 14 parking spaces, currently under construction.<sup>1</sup>

North of the site, across Market Street, are the United Nations Plaza, the 60-foot high Federal Office Building, the 4-story 72-foot high Orpheum Theater and the 8-story 84-foot high Bay Heritage Financial Building (Figure 2, page 3). The Orpheum Theater has been designated a City Landmark (see III.B.12. Cultural). Across Eighth Street southwest of the project block is the 13-story Holiday Inn, Franklin Savings, the 10-story San Franciscan Hotel and a parking structure. A 17-story expansion of the Holiday Inn (EE79.314) has been approved for the site of the parking structure. Fox Plaza II (EE79.449), located 1 block southwest of the project block at Market and Hayes Streets is in the planning stages and would be a 10-story office tower addition to an existing 2-story structure at Fox Plaza. At 29 stories, the Fox Plaza building is the tallest building in the vicinity of the project site. Along Mission Street near the project site, buildings are predominantly low-rise, 2 to 4 stories. There is a variety of commercial/retail uses along Mission Street, including clothing outlets, and electronic, auto repair and import-export shops.

The structure would be designed to contain a base, mid-section and top. The base would rise 85 feet in height as noted. The Market Street face of the base would be visually defined by ceramic tiles at the base and top of the columns. The balcony at the second floor and the setback at the fifth floor would be fronted with decorative iron railings. The columns would rise from the second floor to the fifth floor, giving vertical emphasis to the balcony. All glass in the base of the structure would be clear, enabling passersby to view activities within the building.

The building's mid-section would be composed of setbacks and terraces. The Market Street face would consist of clear glass window panes set into gridded white enamel metal frames. The terraces would contain potted trees, shrubs and vines, and would be

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<sup>1</sup> Assessor's Block 3702, Lots 42A and 43, 1155 Market Street Building, EE81.25. A Negative Declaration for the project was adopted and issued on August 13, 1981.

accessible to building tenants. The top of the structure (mechanical penthouse) would consist of a vertical, glass enclosed space (Figure 3, page 4) with a roof pitched on 2 sides terminating the building's height. The setbacks of the mid-section and top of the structure would serve to give the appearance of a building that is increasingly slender at upper levels up to the roofline.

The project site is located in a grid network of local streets (Figure 1, page 2). Market, Fell, Oak, Howard and Folsom Streets are important east-west streets in the vicinity of the proposed project. Van Ness Avenue and Franklin, Sixth, Seventh, Eighth, Ninth, and Tenth Streets are important north-south streets. All of the foregoing streets are designated "Major Thoroughfares" in the Transportation Element of the City's Comprehensive Plan.<sup>1</sup>

Regional access to/from the East Bay and the Peninsula is available via I-80, I-280 and Highway 101, with ramps located south of the project site. Access to/from the North Bay would be via surface streets with the Van Ness Avenue corridor serving as the probable route.

In the project area, Market, Mission, Seventh, Eighth, (Ninth and Tenth between Market and Mission) Leavenworth, Hyde, and Larkin Streets and Van Ness Avenue are designated "Transit Preferential Streets" in the Transportation Element of the City's Comprehensive Plan.<sup>2</sup> Transit services in the project area are shown on Figure 8, page 15.

The project site fronts on Market and Stevenson Streets. Market Street is a 4-lane street which serves as both a Major Thoroughfare and Transit Preferential Street. Stevenson Street is a 2-lane street which serves local access needs (including freight loading) for buildings located between Market and Mission Streets.

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<sup>1</sup>Department of City Planning, "Transportation Element" Comprehensive Plan, San Francisco, 1972, page 24. Major Thoroughfares are defined as: "Cross-town thoroughfares whose primary function is to link districts within the City . . ."

<sup>2</sup>Department of City Planning, "Transportation Element" Comprehensive Plan, San Francisco, 1972, page 24. Transit Preferential Street is defined as: "An important street for transit operations where interface with transit vehicles by other traffic should be minimized."

The project site is within the Downtown Core automobile control area as designated in the Transportation Element.<sup>1</sup> This is defined as an area where "priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors" and "the limited street and parking space within this core should be available for these functions" and "a continuing effort should be made to reduce the impact of the private commuter vehicle."

Based upon existing peak hour traffic volumes (Table 1, page 13) service levels have been calculated for nearby signalized intersections<sup>2</sup> and are on file at the Office of Environmental Review, 45 Hyde Street.

Public off-street parking facilities have been surveyed (within 2,000 feet of the site) in the area bordered by Harrison, Eighth, Folsom, Tenth, Howard, Eleventh, Market, Van Ness, Turk, Polk, Ellis, Taylor, Eddy, Market, Fifth, Howard, Sixth, Folsom and Seventh Streets.<sup>2</sup> This area has 5,720 public available off-street spaces with an occupancy of approximately 92%.

On-street parking on the streets surrounding the project site consists of 14 metered spaces on Seventh Street and 32 metered spaces on Eighth Street. The Market Street block face has an unmetered, 4-vehicle commercial loading zone near Seventh Street. The Seventh Street block face has 4 unmetered commercial loading zones.

A recent transportation study for the project area showed that the sidewalks and crosswalks serving the project site operate at unimpeded conditions during peak hours<sup>2</sup> (pedestrian flow definitions are on file at the Office of Environmental Review, 45 Hyde Street).

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<sup>1</sup> Department of City Planning, "Transportation Element" Comprehensive Plan, San Francisco, 1972. Transit Preferential Street is defined as: "An important street for transit operations where interface with transit vehicles by other traffic should be minimized."

<sup>2</sup> TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981 (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)



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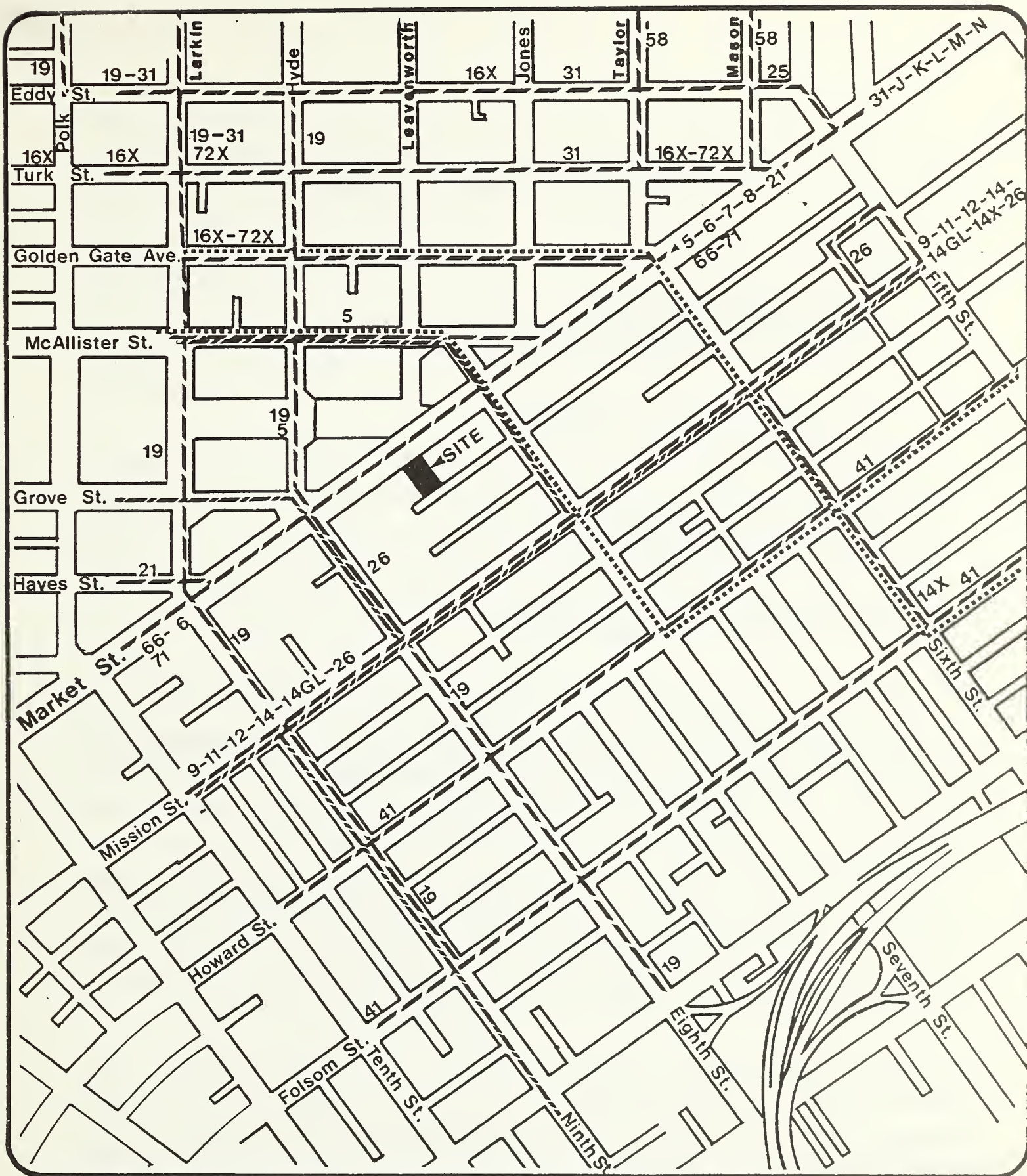
TABLE I  
EXISTING PM PEAK HOUR TRAFFIC VOLUMES  
ON STREETS NEAR THE PROJECT SITE<sup>1</sup>

<u>Street</u>	<u>Volume</u>
Seventh (Market to Mission)	1,215
Seventh (Bryant to Harrison)	1,150
Eighth (Market to Mission)	1,955
Eighth (Harrison to Bryant)	1,650
Market (Seventh to Eighth)	1,000
Mission (Seventh to Eighth)	1,610

Source: TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981. (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)

<sup>1</sup>For existing intersection service levels, see Table 4, page 22.

The project site is within 2,000 feet of 25 Muni lines (see Figure 8, page 15). The project site would also be served by BART (via the Civic Center station), Golden Gate Transit (via the Civic Center Transbay routes), and San Mateo County Transit (via bus lines on Mission Street).



## Transit Services

- MUNI Lines
- Golden Gate Lines
- SamTrans Lines



North  
Not to Scale

Figure No. 8



## II. ENVIRONMENTAL EVALUATION CHECKLIST

A. GENERAL CONSIDERATIONS:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?	—	—	<u>X</u>	—	<u>X</u>
2. Would the project require a variance, or other special authorization under the City Planning Code?	—	—	<u>X</u>	—	<u>X</u>
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies?	<u>X</u>	—	—	—	<u>X</u>
4. Would the project conflict with adopted environmental plans and goals?	—	—	<u>X</u>	—	<u>X</u>

The proposed project would respond to several policies of the Urban Design Element of the Comprehensive Plan (Table 8, page 32). Policies 3 and 4 of the Revisions to the Transportation Element of the Master Plan Regarding Parking,<sup>1</sup> as contained in the Transportation Element of the San Francisco Comprehensive Plan, discourages the addition of new long and short-term parking spaces in the Downtown Core but call for peripheral parking sites outside the core area. The project site is within the area shown as the Downtown Core on Map A of the Plan, because the project, as proposed, would not supply parking spaces in accordance with the parking restrictions of the Plan, because the project would not directly provide peripheral parking. However, the sponsor has agreed to participate in the eventual development of such facilities.

The proposed project would not require any exceptions to the City Planning Code. The project would be subject to discretionary review by the City Planning Commission.<sup>2</sup> Evaluation criteria under this process include the protection and enhancement of the pedestrian environment; preservation of architecturally and historically significant

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<sup>1</sup> Adopted January 20, 1977, by City Planning Commission Resolution 7647.

<sup>2</sup> San Francisco City Planning Commission, Resolution 8474, adopted January 17, 1980, applicable to all proposals in the C-3 district.

buildings; preservation of housing; avoidance of industrial displacement; adequate and appropriate means of transportation to and from the project site; energy conservation; physical relationship of the proposed building to its environs; and effects on views from public areas and on the City skyline.

Discretionary Review of the project by the City Planning Commission would also be required in accordance with Planning Commission Resolution No. 6111, adopted June 29, 1967. This resolution requires Discretionary Review for all development proposed along Market Street.

The project would be required to comply with Title 24, Division 20, Article 2 of the California Administrative Code regarding Energy Conservation Standards for new non-residential buildings. Designed to help reduce energy consumption in California, these regulations set forth design criteria for buildings and stipulate maximum allowable energy consumption figures. Under the present law, the project sponsor would have to conform with these standards (see Section II.B.10. Energy and Natural Resources, page 57).

## B. ENVIRONMENTAL ISSUES

I. <u>Transportation/Circulation.</u> Would the construction or operation of the project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Change in use of existing transportation systems? (transit, roadways, pedestrian ways, etc.)	___	<u>X</u>	___	___	<u>X</u>
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	___	___	<u>X</u>	___	<u>X</u>
c. Effects on existing parking facilities, or demand for new parking?	<u>X</u>	___	___	___	<u>X</u>
d. Alteration to current patterns of circulation or movement of people and/or goods?	___	<u>X</u>	___	___	<u>X</u>
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	___	___	<u>X</u>	___	___
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities? (Potential need for sidewalk repairs.)	___	<u>X</u>	___	___	<u>X</u>
g. Construction of new public roads?	___	___	<u>X</u>	___	___

## PROJECT IMPACTS

Project and Cumulative Trip Generation/Distribution. The City's transportation impact analysis guidelines<sup>1</sup> suggest that 17.5 daily person trips should be assumed as the trip generation rate per 1,000 square feet of net area in an office project. It is estimated<sup>2,3</sup> that the project's commercial areas would generate 150 daily person/trips per 1,000 square feet of net retail area. About 25% of these commercial-generated trips would be internal to the project (i.e., within or between the project building). The external commercial trips would be 15% auto, 40% Muni and 45% walk.<sup>4</sup>

The proposed project would have a net office area of 105,000 square feet and a net retail area of 8,000 square feet. As shown in Table 2, the proposed project would generate about 3,040 daily person trips (including trips to/from the commercial areas which would be internal to the project) of which approximately 1,110 would be work trips and 1,930 would be non-work trips. Approximately 490 of the daily trips would occur during the evening peak hour.<sup>5</sup>

In comparison with the foregoing figures, cumulative travel for downtown projects under construction, approved or under formal review<sup>6</sup> as of May 1, 1982 would be approximately 62,000 peak hour person trips.<sup>7</sup> Of the approximately 17.7 million square feet calculated in the cumulative analysis, approximately 8.8 million square feet constitute those downtown projects under formal Departmental review. The number of peak hour person-trips may therefore be altered due to postponements and revisions in proposed projects, as well as those that are discontinued or disapproved.

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<sup>1</sup> San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, July 3, 1980 (revised October 1980).

<sup>2</sup> Institute of Transportation Engineers, Trip Generation, Virginia, 1979.

<sup>3</sup> California Department of Transportation, 11th Progress Report on Trip Ends Generation, San Francisco, July 1976, pages 168, 171.

<sup>4</sup> Surveys conducted by EIP Corporation at various retail uses on April 2, 1982 (survey on file at Office of Environmental Review, 45 Hyde Street).

<sup>5</sup> San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, July 3, 1980 (revised October 1980).

<sup>6</sup> A list of downtown projects which are under construction, have been approved or are under formal review (a cumulative total of about 17.7 million square feet) is on file at the Office of Environmental Review, 45 Hyde St.

<sup>7</sup> Based upon the City's guideline of 17.5 daily person trips per 1,000 square feet with 20% of the daily trips during the p.m. peak hour.



TABLE 2  
PROJECT TRIP GENERATION

<u>Land Use</u>	<u>Daily Trip Rate per Floor Area</u>	<u>Daily Trips</u>	<u>Ratio of Work/Non Work Trips</u>	<u>Daily Work/Non Work Trips</u>	<u>%Daily Trip in PM Peak Hour (4:30 5:30)</u>	<u>PM Peak Hour Trip</u>
105,000 sq. ft. Office	17.5 <sup>1</sup> / 1,000 sq. ft.	1,840	57%/43% <sup>1</sup>	1,050/790	20% <sup>1</sup>	370
8,000 sq. ft. Commercial	150/1,000	1,200 <sup>3</sup>	5%/95% <sup>4</sup>	60/1,140	10% <sup>2</sup>	120 <sup>3</sup>
		3,040		1,110/1,930		490

<sup>1</sup>Source: San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, July 3, 1980 (revised October 1980).

<sup>2</sup>Source: California Department of Transportation, 11th Progress Report on Trip Ends Generation, San Francisco, July 1976, pages 168, 171.

<sup>3</sup>The analysis assumes that 25% of these trips would be internal to the proposed project (between the office tenants and commercial areas).

<sup>4</sup>Institute of Transportation Engineers, Trip Generation, Virginia, 1979.

TABLE 3  
PROJECT AND CUMULATIVE TRIP GENERATION DURING  
PM PEAK HOUR<sup>1</sup>

<u>Mode and Distribution</u>	<u>Project</u>	<u>Other Development</u>	<u>Total</u>
Auto	145	22,300	22,445
Muni	145	17,900	18,045
BART	55	9,400	9,455
AC	30	5,200	5,230
SamTrans	5	900	905
SP	15	2,700	2,715
GGT	15	2,900	2,915
Ferry	5	900	905
Other	<u>80</u>	<u>1,700</u>	<u>1,780</u>
TOTALS	<sup>3</sup> 495	<sup>4</sup> 63,900	64,395

<sup>1</sup>Source: Modal split factors for office buildings contained in Guidelines for Environmental Evaluation - Transportation Impacts, Department of City Planning, San Francisco, July 3, 1980 (revised October 1980). Above calculations include external commercial trips derived from surveys conducted by EIP Corp. at various retail uses on April 2, 1982.

<sup>2</sup>Includes 30 pedestrian trips to/from commercial areas which would be internal to the proposed project.

<sup>3</sup>This number exceeds the 490 person-trip projection (see Table 3, page 22) because intermodal transfers are included. These transfers are reflected in the modal split distribution outlined in Guidelines for Environmental Evaluation - Transportation Impacts, June 1980 (revised October 1980).

<sup>4</sup>Exceeds the estimate of 62,000 trips due to the inclusion of intermodal transfers.

The 1145 Market Street project would amount to about 0.8% of the cumulative peak hour trip generation of these projects.

Based upon the suggested modal split in the City guidelines, the apportionment of project trip generation has been calculated and compared to the cumulative trip generation of other development. The trip totals are outlined in Table 3, page 20, and are the basis for all trip-related impact analyses.

Street Network. Assuming an auto occupancy of 1.4<sup>1</sup> the project would generate a total of about 105 auto trips during the p.m. peak hour. Because the project would not include parking, project traffic would be to/from a variety of parking facilities and would tend to be dispersed on the area's streets. The project would add about 1-2% traffic to existing traffic volumes on the area's streets.

Travel resulting from other downtown development would cumulatively impact the area's streets. Based upon a recent study,<sup>1</sup> the existing intersection service levels are listed in Table 4, page 21, assuming a 1985 occupancy date for all the projects included in the cumulative analysis. The projected service levels (due to cumulative development) are also listed.

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TABLE 4  
EXISTING AND PROJECTED INTERSECTION SERVICE LEVELS

Intersection	Service Levels	
	Existing	1985 w/o Project
Mission/Seventh	A	D-E
Market/Seventh	A	D-E
Mission/Eighth	C	D-E
Market/Eighth	C-D	D-E
Harrison/Seventh	A	D-E
Bryant/Eighth	A	B

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<sup>1</sup> TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981 (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)



These intersections would be approaching unstable flows, although the Bryant/Eighth intersection would continue to operate satisfactorily. Although it would be tenuous to assign project traffic to specific intersections, an increase of 1-2% in intersection volumes (due to the project) would not result in a further decrease in intersection service levels as noted. The downtown freeway network is also a constraint on vehicle access to/from the project area. The Interstate 80 freeway operates at jammed conditions (Service Level E-F) during the evening peak hour.<sup>1</sup> Thus, the overall congestion on the freeway can affect the flow on specific freeway links or individual ramps.

Transit Service. The existing ridership statistics on the lines serving the project site have been provided by the City.<sup>2</sup> Outlined in Table 5, page 23, these data reflect the p.m. peak hour ridership on Muni lines outbound from the downtown area. The projections include increased ridership due to downtown development which is under construction, has been approved or is under formal review and is expected to be constructed and occupied before 1985. A load factor of 1.0 indicates ridership that is 150% of the available seating for most lines. Of the 25 lines serving the project area, 21 lines are projected to have load factors equal to or greater than 1.00 and these lines will experience congested conditions (a load factor of 1.00 reflects full capacity and is considered to be the maximum acceptable load factor). The project would add about 145 passengers to these lines (Table 3, page 20), representing an increase of about 1% in the total projected ridership for all lines serving the site. The load factors would not be measurably affected by the project (see Table 5, page 23).

BART staff<sup>3</sup> have provided the following p.m. peak hour operating statistics for outbound trains at their peak load points (during October-December 1981):

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<sup>1</sup> Leonard Newman, Chief, Highway Operations Branch, Caltrans, telephone conversation, August 7, 1981.

<sup>2</sup> San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, July 3, 1980 (revised October 1980).

<sup>3</sup> John Stamas, Planning Staff, BART, personal communication, April 6, 1982.

TABLE 5

Muni Ridership Data During  
PM Peak Hour - Outbound From CBP<sup>1</sup>

(Muni Lines Within 2,000 Feet - 2-3 Blocks - of Project Site)

<u>Line</u>	<u>PATRONAGE</u>				<u>LOAD FACTORS<sup>2</sup></u>		
	<u>Existing Patronage</u>	<u>1985 Without Project</u>	<u>1985 With Project</u>	<u>Full Capacity</u>	<u>Existing</u>	<u>1985 Without Project</u>	<u>1985 With Project</u>
5	986	1,530	1,535	1,275	0.77	1.20	1.20
6	500	775	780	675	0.74	1.15	1.16
7	327	505	505	450	0.73	1.12	1.12
8	658	1,020	1,025	1,125	0.59	0.91	0.91
9	531	825	830	750	0.71	1.10	1.11
11	676	1,045	1,050	750	0.90	1.39	1.40
12	487	755	760	525	0.93	1.44	1.45
14	1,214	1,880	1,890	1,275	0.95	1.47	1.48
14GL	253	390	395	300	0.84	1.30	1.31
14x	655	1,015	1,020	675	0.97	1.50	1.51
16xz	540	835	840	750	0.72	1.11	1.12
19	528	820	825	825	0.64	0.99	1.00
21	660	1,025	1,030	825	0.83	1.24	1.25
25	496	770	775	600	0.77	1.28	1.29
26	250	385	385	430	0.58	0.90	0.90
31	498	770	775	525	0.95	1.47	1.48
41	90	140	140	325	0.28	0.43	0.43
66	186	290	290	375	0.50	0.77	0.77
71	379	585	590	375	1.01	1.56	1.57
72	276	430	430	300	0.92	1.43	1.43
J	798	1,235	1,240	1,235	0.65	1.00	1.00
K	3,119	4,835	4,860	3,900	0.80	1.24	1.25
L	1,750	2,710	2,725	2,650	0.66	1.02	1.03
M	1,340	2,075	2,085	1,325	1.01	1.57	1.57
N	2,050	3,175	3,190	2,400	0.85	1.32	1.33

<sup>1</sup> Capacity, patronage (without project) and load factors (without project) obtained from Guidelines for Environmental Evaluation Transportation Impact, Department of City Planning, San Francisco, June 1980 (revised October 1980). (Also includes projects approved from November 1980 through October 1981.)

<sup>2</sup> A load factor of 1.00 reflects full capacity ridership at 150% of the available vehicle seats.

TABLE 6  
BART PEAK HOUR OPERATING STATISTICS

	<u>East Bay</u>	<u>With Project</u>	<u>Daly City</u>	<u>With Project</u>
Seats	9,914	9,914	6,523	6,523
Passengers	14,372	14,412	6,558	6,573
Average load factor	1.45	1.45	1.01	1.01

With heavier ridership during portions of the peak hour, certain peak trains experience load factors which are approximately 10% higher.

Cumulative downtown development would increase BART ridership. East Bay trains would experience average peak hour load factors of 2.0-2.1 and higher factors on certain peak trains. The proposed project would add 55 passengers (less than 0.5%) to the existing BART patronage and there would not be a measurable increase in these load factors. BART's short-term (5-year) improvement program calls for an approximate 20% increase in capacity (with added cars and some decrease in headways).<sup>1</sup> These improvements would allow the peak hour load factors to average 1.5-1.6.

Golden Gate Transit District operates 147 buses out of the downtown area during the afternoon peak hour, about 120 buses on financial district routes, and 27 buses on Civic Center routes. On the average, these buses run at their design capacity level as set by Golden Gate policy (i.e., at seating capacity).<sup>2</sup> Golden Gate Transit allows a maximum (crush) capacity of 55 passengers per bus, corresponding to 10 standees, which equates to 8,085 peak hour riders. Current peak hour ridership out of downtown is estimated at 6,620 passengers. On certain peak runs, there may be more than 20 standees.

With a design capacity of 8,085 peak-hour passengers, the effect of cumulative downtown development would be to raise patronage to about 9,500 passengers (18% over capacity). The proposed project would add 15 trips (or approximately 0.15%) to the projected ridership (see Table 3, page 20). Because of financial limitations, the District would probably not be able to increase its capacity to accommodate the increased demand.

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<sup>1</sup> Alan Zahradnik, Planning Staff, Golden Gate Transit, telephone conversation, April 13, 1982.

<sup>2</sup> Jim De Hart, Planning Staff, Samtrans, telephone conversation, February 26, 1982.



There are currently 12 Samtrans buses leaving the downtown area during the afternoon peak hour. They operate at about 90% of seating capacity, corresponding to peak-hour ridership of about 510 passengers.<sup>1</sup> Assuming a maximum capacity of 125% of available seats, it is estimated that there is a reserve capacity for 240 passengers.

The patronage from cumulative development would exceed the available 240-passenger reserve capacity of Samtrans. The proposed project would add about 5 passengers to the trips generated by new development (see Table 3, page 20). No specific capacity improvements have been cited by the District.

Parking. The proposed project would incur a total parking demand of about 170 spaces, calculated as follows:

1,110 daily office and retail work trips x 36% auto mode ÷ 1.4 (auto occupancy) ÷ 2 trips per vehicle = 140± long-term spaces

790 daily non-work (office) trips x 36% auto ÷ 1.4 (auto occupancy) ÷ 2 trips per vehicle ÷ 5.7 turnovers daily = 20± short-term spaces

840 daily non-work commercial trips (external to the project)<sup>1</sup> x 15% auto ÷ 1.2 (auto occupancy) ÷ 2 trips per vehicle ÷ 5.7 turnovers daily = 10± short term spaces

Based upon the above calculations, the addition of this parking demand would increase parking occupancy from about 92% to 95% in the area surveyed (See page 12 of this document). Cumulative parking demand will be generated by other approved projects in the vicinity of the proposed project. The additional parking demand by 10 United Nations Plaza and 1155 Market would probably result in 100% parking occupancy in the area of the proposed project. As parking occupancy approaches 100%, employees may chose to park further from their place of employment or shift to public transit or carpools as alternate modes of travel.

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<sup>1</sup> Calculation based upon data from National Cooperative Highway Research Program, Urban Travel Patterns for Hospitals, Universities, Office Buildings and Capitals, Report No. 62, 1969.

<sup>2</sup> 1,200 daily commercial trips less 300 (25%) commercial trips internal to the project, less 60 commercial work trips = 840 daily non-work commercial trips external to the project.

Off-street freight loading needs (as per Planning Commission policy<sup>1</sup>) have been calculated to be 1 space 12 feet wide and 35 feet long. Peak hour demand could be 1-2 spaces.<sup>2</sup> The project would include a 10-foot wide loading bay 25 feet long fronting on Stevenson Street. The bay could accommodate a standard single-unit truck. Larger tractor-trailer trucks would be unable to maneuver into the loading bay due to the 28-foot (curb to curb) width of Stevenson Street.

Pedestrian Flows. With no on-site parking, virtually all of the project's trips would involve some walking. Without the project, the cumulative effect of other development would be a degradation from unimpeded to impeded pedestrian flows on the Market Street sidewalk during the peak hours.<sup>3</sup>

The proposed project's primary access would be on Market Street; pedestrian access would also be available on Stevenson Street. If one-half of the project's pedestrian travel occurred on the Market Street sidewalk during the peak hours, the existing pedestrian flows would increase by about 30%. With this increase, the pedestrian flows would remain within the unimpeded category.

The most direct pedestrian impact would relate to construction activities which would probably encroach onto the Market Street sidewalk, reducing the area available for pedestrian flow.

2. <u>Land Use.</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
Would the proposed project:					
a. Be different from surrounding land uses?	___	___	<u>X</u>	___	<u>X</u>
b. Disrupt or divide the physical arrangement of an established community?	___	___	<u>X</u>	___	<u>X</u>

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<sup>1</sup>San Francisco Planning Commission, Resolution No. 9286, adopted January 21, 1982.

<sup>2</sup>Wilbur Smith & Assoc., Center City Ped: Circ. & Goods Movement Study, Sept. 1980, p. 73.

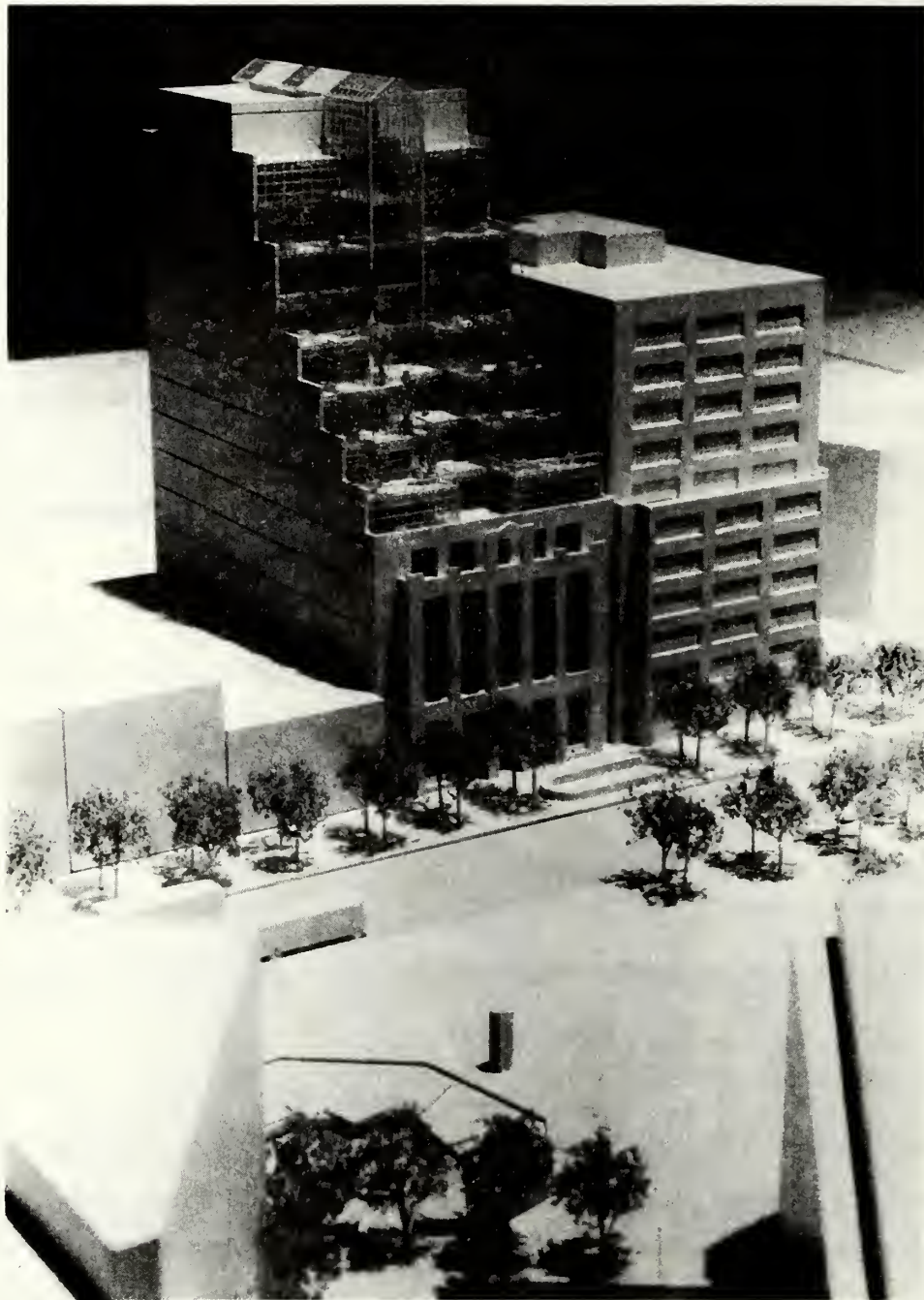
<sup>3</sup>TJKM Transportation Consultants, Preliminary Draft Transportation Impact Study for the 1155 Market Street Building, March 28, 1981 (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)

The project site is within an urbanized, developed area adjacent to the Civic Center. Office use of the project with ground floor retail use would be consistent with C-3-G Zoning (see Section I, Project Description and Setting, page I), and would be similar to existing and approved adjacent land uses. The project would be between 5 and 11 stories taller than other buildings in the project block, and 2 stories taller than the building approved for construction on the adjacent property to the west (Figures 9 and 10, pages 28 and 29). The setback at 85 feet would create visual continuity between the project and other buildings in the area including the Civic Center buildings, Orpheum Theater, 10 United Nations Plaza, and the Odd Fellows Temple (see Section II, B. 3. Visual Quality and Urban Design, following). The building would be lower than the Fox Plaza II building, and about equal in height to the Holiday Inn on the west side of Eighth Street between Market and Mission.

3. <u>Visual Quality and Urban Design</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
<u>Would the proposed project:</u>					
a. Obstruct or degrade any scenic view or vista open to the public?	___	___	<u>X</u>	___	<u>X</u>
b. Reduce or obstruct views from adjacent or nearby buildings?	___	___	<u>X</u>	___	<u>X</u>
c. Create a negative aesthetic effect?	___	___	<u>X</u>	___	<u>X</u>
d. Generate light or glare affecting other properties?	___	___	<u>X</u>	___	<u>X</u>

The Civic Center Market building that occupies the site lacks architectural detail and is plain in appearance (Figure 7, page 9). The Odd Fellows Temple, and Strand and Embassy Theaters on the project block east of the project site have detailed facades and defined building bases. The Trinity Apartments are set back from the southeast corner of the intersection of Market and Eighth Streets and form a break in the continuous building wall along the south side of Market Street. The Trinity Apartments' driveways and parking areas create a lack of enclosure or definition to the intersection of Market and Eighth Streets and weaken visual identification of the portion of Market Street near the project site. Automobiles parked on the lots create contrasting visual elements to buildings fronting Market Street. Views from the site are of Market Street, buildings along Market Street and taller buildings north of Market Street nearer the center of downtown. The United Nations Plaza is the major pedestrian open space area to be seen from the site.



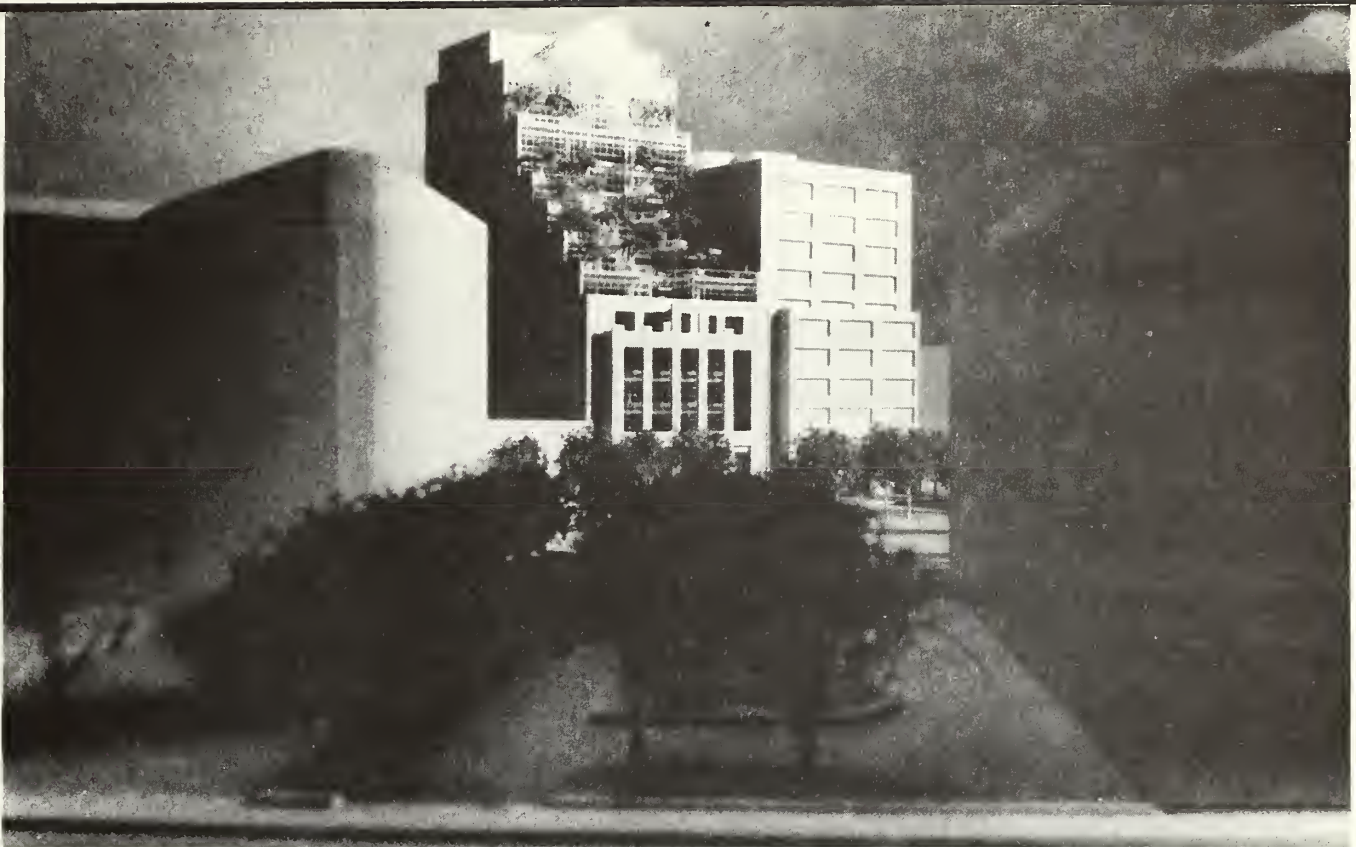


Aerial view of proposed project over United Nations Plaza.  
View is to the southwest. Proposed (and approved for construction)  
1155 Market Street building is to the right of the project.

## Model Photograph

SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 9



View south toward proposed project from McAllister Street.



View west along Market Street toward proposed project.

## Model Photographs

SOURCE: Backen, Arrigoni and Ross, Architects

Figure No. 10



Buildings surrounding the Plaza range from 60 to 80 feet in height and define the edge of the Plaza. The Bay Heritage Financial Building has an arcade along its Plaza entry and contains a light-colored precast concrete exterior. The Federal Building has a bulky appearance; it has a granite exterior and arched entry and pillars, providing visual contrast to the upper levels. The Orpheum Theater has a decorative building front with arched windows; its beige building facade is divided into sections by columns which rise the full height of the 4-story structure and then project above the roofline.

Views toward the site are from the United Nations Plaza (Figure 10, page 29), and nearby streets and buildings. From locations further from the site, such as the Civic Center, the site is generally obscured by intervening structures. Leavenworth Street (which intersects the United Nations Plaza) and Grove Street form diagonal angles with the northeast-southwest alignment of Market Street and focus on the project site. From Grove Street near the Civic Center, the west-facing side wall of the 1145 Market building can be seen, including a portion of the facade of the Post Office on Seventh Street and a portion of the Trinity Apartments west of the site. The Civic Center Market building is a major visual element from Leavenworth Street between the cross streets of Eddy and Ellis Streets, as is the east wall of the Trinity Apartments and rooftops of structures south of Mission Street.

There are a number of proposals contained in the report, Guiding Downtown Development to which the project may be compared for visual quality and urban design issues. Relation of the proposed project to Guiding Downtown Development is shown in Table 7 (page 31).

Relation of the proposed project to the provisions of the Urban Design Plan, an element of the General Plan, is shown in Table 8 (page 32).

4. <u>Population, Employment, Housing:</u> Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Alter the density of the area population?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
b. Have a growth-inducing effect?	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>	<u>X</u>
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>



TABLE 7

## RELATIONSHIP OF THE PROPOSED PROJECT TO GUIDING DOWNTOWN DEVELOPMENT

<u>Guiding Downtown Development</u>	<u>Proposed Project</u>
<p>A. Building Size, Design and Appearance</p> <p>(2) Adjust heights to protect and enhance related locations (p. 4).</p> <p>(5) Strengthen urban design standards creating interesting street frontages, pedestrian scale, building relationships, facade relationships, preserving architecturally significant buildings and creating a graceful skyline (p.10).</p>	<p>The higher building mass at the rear of the lot would allow more light to penetrate Market Street than if the building contained no setbacks.</p> <p>The project's proposed setback at 85 feet would create visual continuity between the project and other structures in the project area by continuing the predominantly 85-foot high facade along Market Street. The height and spacing of the columns would be similar to those of the Federal Building and would allow light and shadow to be cast against the Market Street face of the structure, thereby increasing visual interest. The concrete exterior of the structure would be light grey in color, similar to the Federal Building, and would contain a white quartz aggregate which would reflect light in a sparkling fashion. The structure would not require the removal of an architecturally significant building.</p>
<p>B. Retail Services</p> <p>(ii) Devote ground floor space fronting on streets to retail uses (page 11).</p>	<p>Retail convenience shopping would be devoted to the ground floor of the building.</p>

TABLE 8  
RELATIONSHIP OF PROPOSED PROJECT TO URBAN DESIGN PLAN<sup>1</sup>

<u>Urban Design Plan</u>	<u>Proposed Project</u>
Objective 1 - City Pattern	
Policy 3: Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts.	The scale and mass of the building would be in keeping with other buildings in the project vicinity.
Objective 2 - Conservation	
Policy 6: Respect the character of older development nearby in the design of new buildings.	Building setbacks at upper levels, building columns and structural definitions of an 85-foot high building base would visually relate to scale and design of Civic Center buildings, Federal office building, and other structures in the project area. The setbacks would distinguish the building above the 85-foot level, generally giving the appearance of two buildings, one along Market Street and the second rising south of the Market Street frontage.
Objective 6 - Major New Development	
Policy 1: Promote harmony in the visual relationships and transitions between new and older buildings.	The Market Street facade would relate to both the Federal Building and adjacent 1155 Market building (under construction). The formal qualities of the building would relate to the Civic Center buildings. The proposed project would be taller than other existing and proposed buildings on the project block, and existing buildings on the United Nations Plaza. The setbacks at upper levels would aid in scale and bulk transition between the proposed project and other lower structures in the project area.
Policy 2: Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance.	See above discussions. The color of the building would be similar to buildings of the Civic Center and the Federal Office Building.

TABLE 8  
(Continued)

Policy 4: Promote building forms that will respect and improve the integrity of open spaces and other public areas. Buildings to the south, east and west of parks and plazas should be limited in height or effectively oriented so as not to prevent the penetration of sunlight to such parks and plazas.	Building setbacks at upper levels would minimize shadows cast by the project on Market Street and the United Nations Plaza (see Section III.B.7., Air Quality, Climate, page 39.) The effort to minimize shadows on the Plaza results in added building height to maintain the permitted Floor Area Ratio of 10:1.
Policy 5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.	See discussion regarding Policy 1 on page 38. The building would be 72 feet taller than the Civic Center Holiday Inn, and 100 feet lower than the structure at Leavenworth and McAllister Streets, one block north of the project site.
Policy 6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.	The bulk of the building's base would be similar to Civic Center buildings, the Federal Office Building, the approved 1155 Market Street project on the adjoining lot to the west of this proposed project, and other structures in the project area.
Objective 4 - Neighborhood Environment	
Policy 12: Install, promote and maintain landscaping in public and private areas.	Balconies at upper levels would contain potted trees, shrubs and vines.
Policy 13: Improve pedestrian areas by providing human scale and interest.	Retail shops would be provided on the ground floor. Clear glass would provide views to interior building areas. A pedestrian arcade would pass through the ground floor of the building connecting Market Street and Stevenson Street.

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<sup>1</sup>San Francisco Department of City Planning, Urban Design Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission, August 26, 1971.



	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
d. Create or eliminate jobs during construction and operation and maintenance of the project?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
e. Create an additional demand for housing in San Francisco?	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>	<u>X</u>

About a dozen employees work at the partially vacant Civic Center Market Building on the project site. At full occupancy, about 260 people could be employed at the building.<sup>1</sup> These jobs would be displaced by the proposed office building. An estimated \$5 million would be spent for construction labor. Assuming an annual cost, including wages, taxes and benefits, of \$28,000 per construction worker, about 180 person years of construction labor would be generated. Since project construction is expected to take place over a 14-month period, average construction employment would be about 160 full-time jobs. Secondary temporary employment would be generated due to demands for goods and services by construction workers and their families.

About 560 jobs could be created by the project: about 540 office employees and about 20 employees in the commercial/retail areas.<sup>1</sup> These new jobs may be considered growth-inducing and would result in increased demand for commercial, social, medical and municipal services, and increased use of streets, highways and transit systems.

The new jobs would be primarily in the middle-income range: clerical and middle management positions. The majority of clerical workers are in the income category of \$25,000 or less annually, and managers, professionals, etc., are in the income category of \$25,000 or more annually.<sup>2</sup> The demand for specific types of dwelling units in San Francisco would be reflective of employee income.

<sup>1</sup> Figures based on 1 employee per 250 square feet of office space and 1 employee per 500 square feet of retail space.

<sup>2</sup> Environmental Impact Planning Corporation, "Estimating Employee/Housing Impacts for Downtown San Francisco Highrise Office Buildings," October 1981. A copy of this information is available at the Office of Environmental Review, 45 Hyde Street, San Francisco, California 94102.

The proposed project also would create a demand for about 123 dwelling units in the City.<sup>1</sup> In order to alleviate the housing demand in San Francisco, the City Planning Commission has, since December 1980, approved new commercial/office development in the C-3 districts under the condition that renovation or construction of housing be provided by developers.

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<sup>1</sup> Figures derived from "Housing Requirements for Office Development" Memorandum to the City Planning Commission from Dean Macris, October 8, 1981.

$$\frac{137,500 \text{ gross square feet of office space}}{250} \times 40\% \div 1.8 = \text{number of housing units required, wherein 40\% represents the percentage of office workers expected to live in San Francisco and 1.8 equals the number of office workers per San Francisco household.}$$

5. <u>Soils and Geology</u> Would the proposed project result in or be subject to:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Potentially hazardous geologic or soil conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)	___	___	<u>X</u>	___	<u>X</u>
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)	___	___	<u>X</u>	___	<u>X</u>
c. Generation of substantial spoils during site preparation, grading, dredging or fill?	___	___	<u>X</u>	___	<u>X</u>

The project site is at approximate Elevation +36 feet San Francisco Datum (SFD).<sup>1</sup> The site slopes gently (less than 2%) down to the southeast.<sup>2</sup> Soil investigation of the adjoining lot southwest of the site indicates the following soil sequence: artificial fill and dune sand to +20 feet SFD, loose to dense sand and sandy peat to -18 feet SFD, stiff clay to -43 feet SFD, sand to -48 feet SFD, Franciscan Formation bedrock below the sand at - 48 feet SFD.<sup>3</sup>

Groundwater was encountered at +16 feet SFD.<sup>3</sup> A U.S. Geological Survey boring 1/2 block west of the site indicates fill to +26 feet SFD, dune sand to +11 feet SFD, undifferentiated clay and sand to at least -4 feet SFD, with bedrock elevation predicted at approximately -160 feet SFD.<sup>4</sup>

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<sup>1</sup> San Francisco Datum is approximately 8.6 feet above mean sea level.

<sup>2</sup> Site visit by EIP geologist.

<sup>3</sup> PSC Associates, Inc., Soil Engineering Investigation, Proposed Building at 1155 Market Street, San Francisco, California, San Francisco, February 27, 1981, (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)

<sup>4</sup> J. Schlocker, Geology of the San Francisco North Quadrangle, California, U.S. Geologic Survey, Prof. Paper 782, U.S. Government Printing Office, Wash., DC, 1974, plate 1, plate 3, scale 1:24,000, page 97.



Construction in unengineered fill, dune sand and loose sand is complicated by generally unstable and free-running soil conditions. Seismic stability of the soils underlying the project site is poor to moderate.<sup>1</sup> During a seismic event similar to the 1906 San Francisco earthquake (Richter magnitude 8.3)<sup>2</sup> the site would be subject to "very strong" groundshaking, which could cause severe cracking and occasional collapse of masonry structures.<sup>3</sup>

Liquefaction<sup>4</sup> of the fill and dune sand during seismic activity is unlikely since they are above the water table; they would, however, be subject to densification<sup>5</sup> which could result in tilting or sinking of structures supported on them. The loose sand and sandy peat below the water table would be a possible liquefaction hazard to structures supported on them.

The fill, sand and peat above the stiff bay clay are unsuitable for bearing heavy loads; the stiff bay clay is generally suitable as a foundation base.<sup>6</sup> Excavation would cover the entire site and extend to the level of the existing basement, approximately 12 feet below the surface. The base of the excavation would be above the water table. During construction the pit would be shored where necessary to prevent slumping. The maximum

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<sup>1</sup>J. Schlocker, Geology of the San Francisco North Quadrangle, California, U.S. Geologic Survey, Prof. Paper 782, U.S. Government Printing Office, Wash., DC, 1974, plate 1, plate 3, scale 1:24,000, page 97.

<sup>2</sup>Richter Scale: A logarithmic scale developed in 1935 by Charles Richter to measure earthquake magnitude by the energy released, as opposed to earthquake intensity as determined by effects on people, structures and earth materials. The San Francisco earthquake of 1906 is estimated to have had a Richter magnitude of 8.2 or 8.3. Office of Environmental Review, Standard Definitions, San Francisco, California, November 15, 1979.

<sup>3</sup>URS/John A. Blume and Associates, Engineers, San Francisco Seismic Safety Investigation, San Francisco, June 1974, page 14.

<sup>4</sup>Liquefaction: Earthquake-induced transformation of a stable granular material, such as sand, into a fluidlike state, similar to quicksand. Office of Environmental Review, Standard Definitions, San Francisco, California, November 15, 1979.

<sup>5</sup>Densification: Compaction of loose soil such that it loses pore space and occupies a smaller volume, i.e., becomes more dense. American Geological Institute, Glossary of Geology, 2nd ed., R. L. Bates and J. A. Jackson, editors, Washington, DC, 1980.

<sup>6</sup>PSC Associates, Inc., Soil Engineering Investigation, Proposed Building at 1155 Market Street, San Francisco, California, San Francisco, February 27, 1981 (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)

amount of soil to be removed is not known, but since the existing basement covers nearly the entire site it probably would not exceed a few hundred tons. Material suitable for backfill would be sold; material unsuitable for fill would be removed to an unspecified disposal site on the Peninsula.<sup>1</sup>

The proposed foundation design would use friction-bearing piles driven to sufficient depth below the basement for building support. The time required to drive the piles would be about 3 weeks. A soils engineer or geological engineer would supervise the setting of piles.<sup>1</sup>

The building would not depend on the artificial fill or loose sand for support because the piles would penetrate to more stable materials, and therefore would not be subject to the densification and liquefaction hazards associated with these materials during seismic events. Foundation design would occur after soils investigations would be completed. The building would meet the requirements of the San Francisco Building Code for seismic design concerning the amount of allowable sway, the attachment of partitions and decorative elements, and the provision of emergency electricity and water services.<sup>2</sup>

6. <u>Water</u> . Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Reduction in the quality of surface water?	—	—	<u>X</u>	—	—
b. Change in runoff or alteration to drainage patterns?	—	—	<u>X</u>	—	—
c. Change in water use?	<u>X</u>	—	—	—	<u>X</u>
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?	—	—	<u>X</u>	—	<u>X</u>

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<sup>1</sup>George Laken, Managing Construction Engineer, Dinwiddie Construction Company, telephone conversation, December 16, 1981.

<sup>2</sup>Michael Chait, Job Captain, Backen, Arrigoni & Ross, Inc., Architects, telephone conversation, December 16, 1981.

The project would use about 19,000 gallons of water per day, which is estimated to be about 17,000 gallons in excess of current water consumption in the existing building on the project site (see II, B.9. Utilities, Public Services, page 55). Water would be used to control dust on the site during site excavation and grading (see II.C. Mitigation Measures, page 63). Dewatering would not be required because the basement floor would be above the water table (see II, B.5., Soils, Geology, page 36).

7. <u>Air Quality, Climate.</u> Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Violation of any ambient quality standard or contribution to an existing air quality violation?	—	<u>X</u>	—	—	<u>X</u>
b. Exposure of sensitive receptors to air pollutants?	—	<u>X</u>	—	—	<u>X</u>
c. Creation of objectionable odors?	—	—	<u>X</u>	—	<u>X</u>
d. Burning of any materials including brush, trees, or construction materials?	—	—	<u>X</u>	—	—
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	—	<u>X</u>	—	—	<u>X</u>

#### Air Quality

The project site is within the northern portion of the San Francisco Bay air basin. The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station at 900 23rd Street, approximately 1.5 miles southeast of the site. Air quality data collected at this monitoring station show that the downtown San Francisco area experiences infrequent violations of the ambient air quality standards for carbon monoxide, ozone, nitrogen dioxide and total suspended particulates.

Local air quality impacts due to the operation of the proposed project would be due to carbon monoxide emissions from motor vehicles. To estimate these effects, calculations of CO levels that would occur in 1984 were made both with and without the proposed



project, including the effects of projects which are approved but not yet built.<sup>1</sup> The results are presented in Table 9, and indicate that violations of the 8-hour CO standard of 9 parts per million (ppm) are predicted to occur under existing conditions and would occur in 1984 with or without the project. The magnitude of the increase in CO due to the project would be less than 0.1 ppm which is within the expected range of error of the air quality model and is not a measurable quantity. No violations of the 1-hour average CO standard would be expected.

It should be noted that the Bay Area is considered a "non-attainment" area for CO, suspended particulates, and oxidants, and that an air quality plan designed to achieve regional air quality goals addresses these problems.<sup>2</sup>

The impact of the project on regional air quality would be due to the net increase in vehicle miles travelled (VMT) by project-related traffic which would total approximately 26,000 VMT daily. This would be about .03% of regional VMT<sup>2</sup> and would not result in a measurable air quality impact. The increase in cumulative total daily VMT due to other downtown projects which are approved but not yet built would be less than .1% of regional daily VMT. This increase also would not result in a measurable air quality impact.

No objectionable odors are expected to occur from construction or operation of the proposed project.

Construction activities would generate pollutants in the vicinity of the project. Trucks and equipment would release exhaust, and earthmoving would generate dust and suspended particulates. Available emission factors<sup>3</sup> previously developed for shopping centers and housing construction in suburban desert areas do not apply to downtown construction

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<sup>1</sup>The procedures used are contained in Guidelines for Air Quality Impact Analysis of Projects, Bay Area Air Pollution Control District, San Francisco, June 1975, updated 1981.

<sup>2</sup>Association of Bay Area Governments, 1979 Bay Area Air Quality Plan, Berkeley, January 1979.

<sup>3</sup>U.S. Environmental Protection Agency, Compilation of Air Pollution Emission Factors, April 2, 1977.

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TABLE 9  
PROJECTED CO CONCENTRATIONS AT CRITICAL INTERSECTIONS<sup>1</sup>  
parts per million (ppm)

<u>Intersection</u>	<u>Existing Conditions</u>		<u>1984 Without Project</u>		<u>1984 With Project</u>	
	<u>1-hour</u>	<u>8-hour</u>	<u>1-hour</u>	<u>8-hour</u>	<u>1-hour</u>	<u>8-hour</u>
Mission/8th Street	31.0	10.0	28.0	10.0	28.0	10.0
Market/8th Street	28.0	10.0	26.0	9.0	26.0	9.0

1-hour CO standard = 35 ppm  
8-hour CO standard = 9 ppm

- 
- <sup>1</sup> Calculations are based on the following assumptions:
- o 1984 emissions rates
  - o 1-hour average background at 14 ppm
  - o 9-hour average background at 8 ppm
  - o 10 mph average speed for peak hour
  - o 20 mph average route speed
-

## Shadows

The proposed building would contain six stepped-back terraces varying in height from 85 feet to 189 feet six inches with the highest point of the project (top of the mechanical penthouse) being 215 feet six inches above grade (Figure 3, page 4).

Sun/shade diagrams were prepared for 8:00 a.m., 10:00 a.m., 12 noon and 4:00 p.m. on the first day of each season using photographic/model techniques and calculation methods. Sun/shade diagrams were also prepared for the first day of winter at 2:00 p.m. to provide a more complete shadow analysis of the project's shadow effects north of the project site along Market Street and the United Nations Plaza. Both existing shaded areas and new shaded areas resulting from the proposed project are shown in Figures 11 through 18, pages 45 through 52.<sup>1</sup> The sun/shade diagrams include shadows that would be cast by the 1145 Market Street Building. The project may be compared to a proposal contained in the report, Guiding Downtown Development, which states that heights should be lowered on the South Market Street frontage between Seventh and Tenth Streets to heights compatible with the United Nations Plaza and to ensure adequate sunlight and spatial definitions to major plazas on Market Street.<sup>2</sup>

### (2) Adjust Heights to Protect and Enhance Selected Locations

"Insure adequate sunlight and spatial definition to the major plazas on Market Street, and continued sunlight to the retail portion of Market Street by lowering heights on the South Market Street frontage between . . . 7th and 10th Streets to heights compatible with the UN Plaza."

The higher building mass at the rear of the lot would allow more light to penetrate Market Street than if the building were rectangular for its full height and contained no setbacks, and would reduce shadows on Market Street and the United Nations Plaza.

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<sup>1</sup> Only those diagrams showing shadows north of the project site along Market Street and the United Nations Plaza are included in this report. A complete set of diagrams showing shadows along Stevenson Street and areas east and west of the project site are available for public review at the San Francisco Department of City Planning, Office of Environmental Review, 45 Hyde Street, San Francisco, California 94102.

<sup>2</sup> City and County of San Francisco, Department of City Planning, Guiding Downtown Development, May 1981, page 4.



Summer shadows are shown on Figures 11 and 12, pages 45 and 46. At 8:00 a.m. the project would shade the northwest half of Market Street opposite the 1155 Market Street Building and shadows would be cast on a portion of the sidewalk in front of the Orpheum Theater. At 10:00 a.m., project shadows would include a portion of Market Street directly in front of the building entry. At noon the project would cast a negligible shadow on the sidewalk in front of the project site. At 2:00 p.m. the project would shade a portion of the adjacent rooftop to the northeast and would extend to the Greyhound Bus Terminal at 4:00 p.m.

Spring and fall shadows are shown in Figures 13 and 14, pages 47 and 48. At 8:00 a.m. the project would shade the plaza area just north of the Orpheum Theater. At 10:00 a.m., area shadows would decrease to cover a portion of Market Street and an area on the south portion of the United Nations Plaza; the fountain would not be shadowed. At 12:00 noon the project would cast shadows over a relatively small area of sidewalk northeast of the project and would not shade the sidewalk at 2:00 p.m. At 4:00 p.m. the project would shade rooftops to the east on Market Street, the Greyhound Bus Terminal on Stevenson Street and the building on the corner of Stevenson and Seventh Streets.

Winter shadows are depicted in Figures 15-18, pages 49 through 52. The low altitude and the extreme southerly position of the sun combined with the existing buildings extensively shadow the United Nations Plaza. At 8:00 a.m. existing buildings shadow the plaza completely. The project would shade the rooftop of the Federal Office Building, which lies northwest of the plaza fountain. At 10:00 a.m., shadows would be less extensive north of the project site with a portion of the United Nations Plaza and fountain exposed to sunlight. At 12:00 noon existing shadows would be less extensive. The project would shade the northernmost tip of the fountain and an area east of the fountain. The fountain would not be shadowed at 12:15 p.m. At 2:00 p.m. the proposed project would not shade any part of the United Nations Plaza, but would shade a portion of the Market Street sidewalk in front of the building. At 4:00 p.m. the Orpheum Theater shadows the plaza completely. The project would shadow rooftops northeast on Market Street, the Greyhound Bus Terminal on Stevenson Street, and the building on the corner of Stevenson and Seventh Streets.

Analysis shows that the project would cast a shadow (assuming continual sunshine) beyond the north curb of Market Street after 10:00 a.m. about 200 days a year for about 1½-2 hours on each morning during the months of January - March, September - December.

The project would shadow a portion of the United Nations Plaza fountain about 60 days a year for about 1½-2 hours each day during the months of November - January.

8. <u>Noise:</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area? (during construction)	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
b. Would existing noise levels impact the proposed use?	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>	<u>X</u>
c. Are Title 25 Noise Insulation Standards applicable?	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>

The project site's noise environment is dominated by traffic. The Environmental Protection Element of the Comprehensive Plan contains a map showing the 1974  $L_{dn}$  noise levels along major thoroughfares.<sup>1,2</sup> The map indicates  $L_{dn}$  noise levels of 75 dBA on Market and 8th Streets, and 70 dBA on 7th Street.<sup>3</sup>

Project construction would require approximately 15 months and would involve removal of the existing structure, site preparation, and construction of the proposed structure. These activities would result in temporary noise levels in excess of those currently at the site vicinity at periodic intervals during the 15 month construction period.<sup>4</sup> For example, foundation work would include up to three weeks of pile driving with an impact-type pile driver. Conventional unmuffled and unshielded pile drivers emit noise levels of 100 to 110 dBA at a distance of 100 feet each time the driver strikes the pile. Assuming noise emissions of 100 dBA at 100 feet and no mitigation, noise levels from pile driving where not shielded by intervening buildings would be 88 dBA or above within 400 feet of the

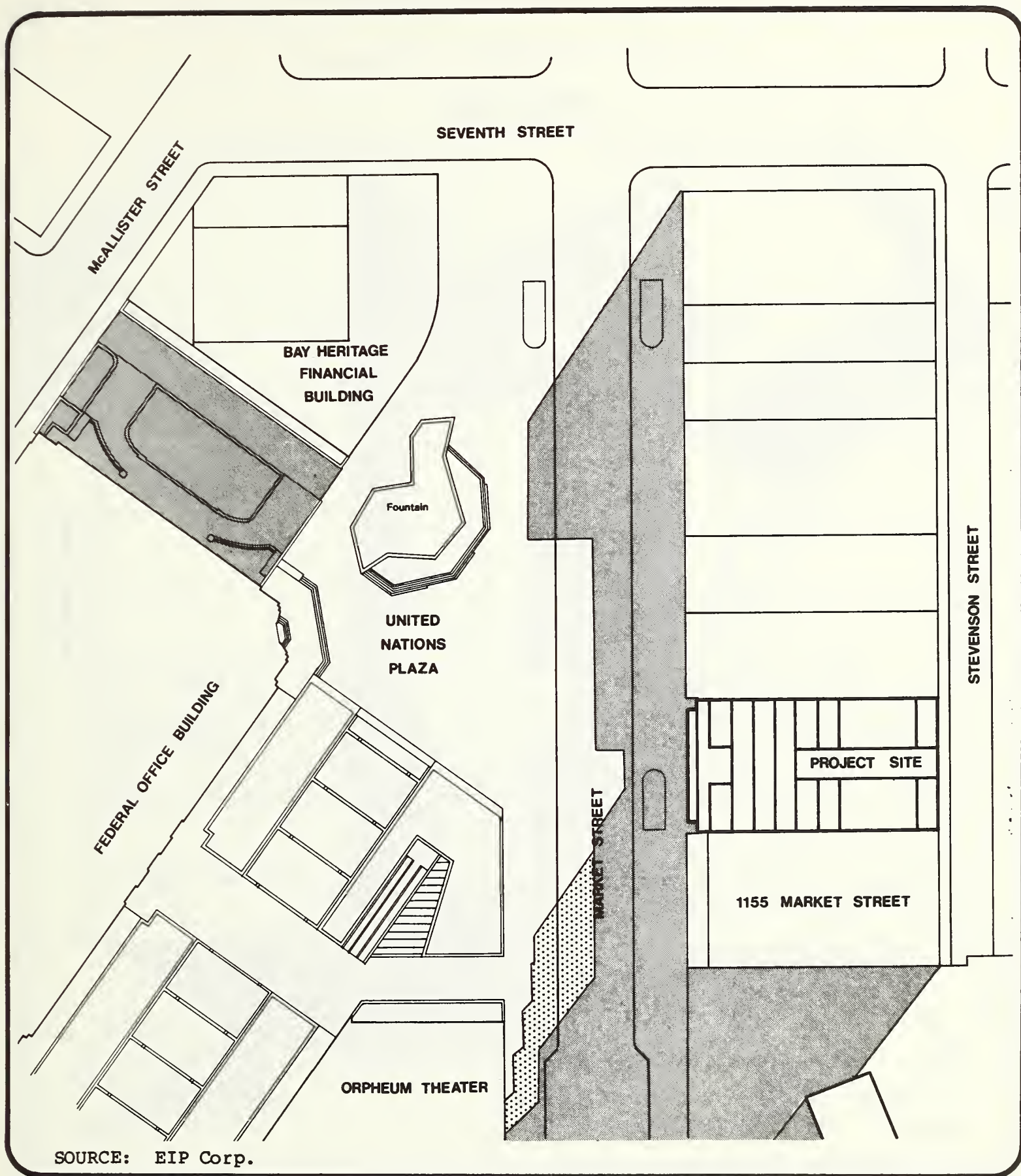
<sup>1</sup>San Francisco Department of City Planning, Comprehensive Plan, "Environmental Protection Element", Transportation Noise Section, adopted by City Planning Commission Resolution 7244, September 19, 1974.

<sup>2</sup> $L_{dn}$ , An averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the great annoyance of nighttime noises. Noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.



<sup>3</sup>dBA: Decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

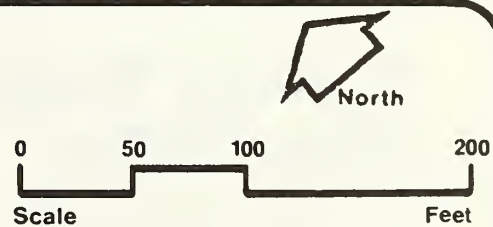
<sup>4</sup>Typical construction noise levels are shown in a chart which is available for public review at the Department of City Planning, Office of Environmental Review, 45 Hyde Street, San Francisco, California 94102.





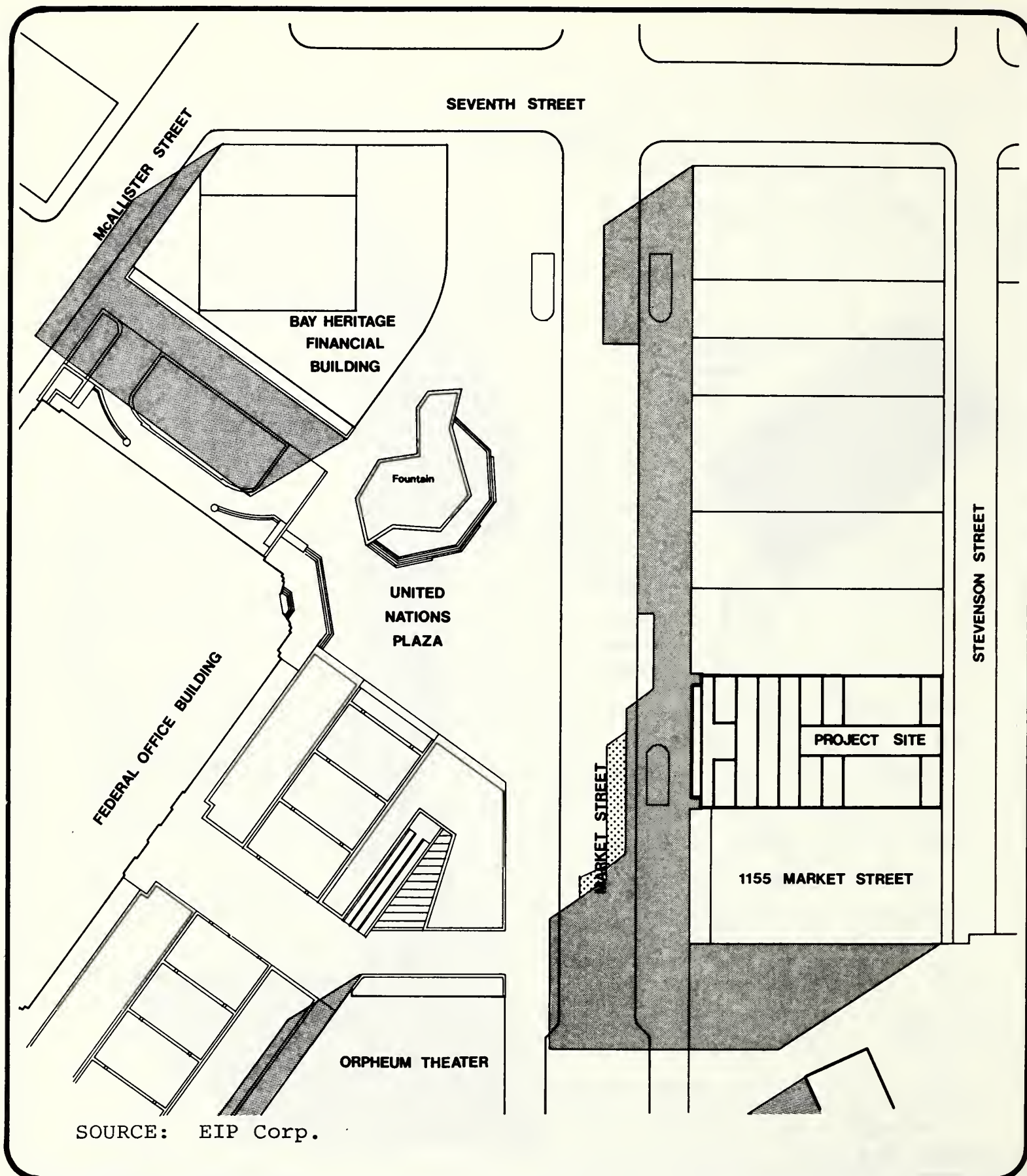
## Shadow Patterns June, 8am

-  Existing Shadows
-  Shadows added by Proposed Project





**Figure No. 11**





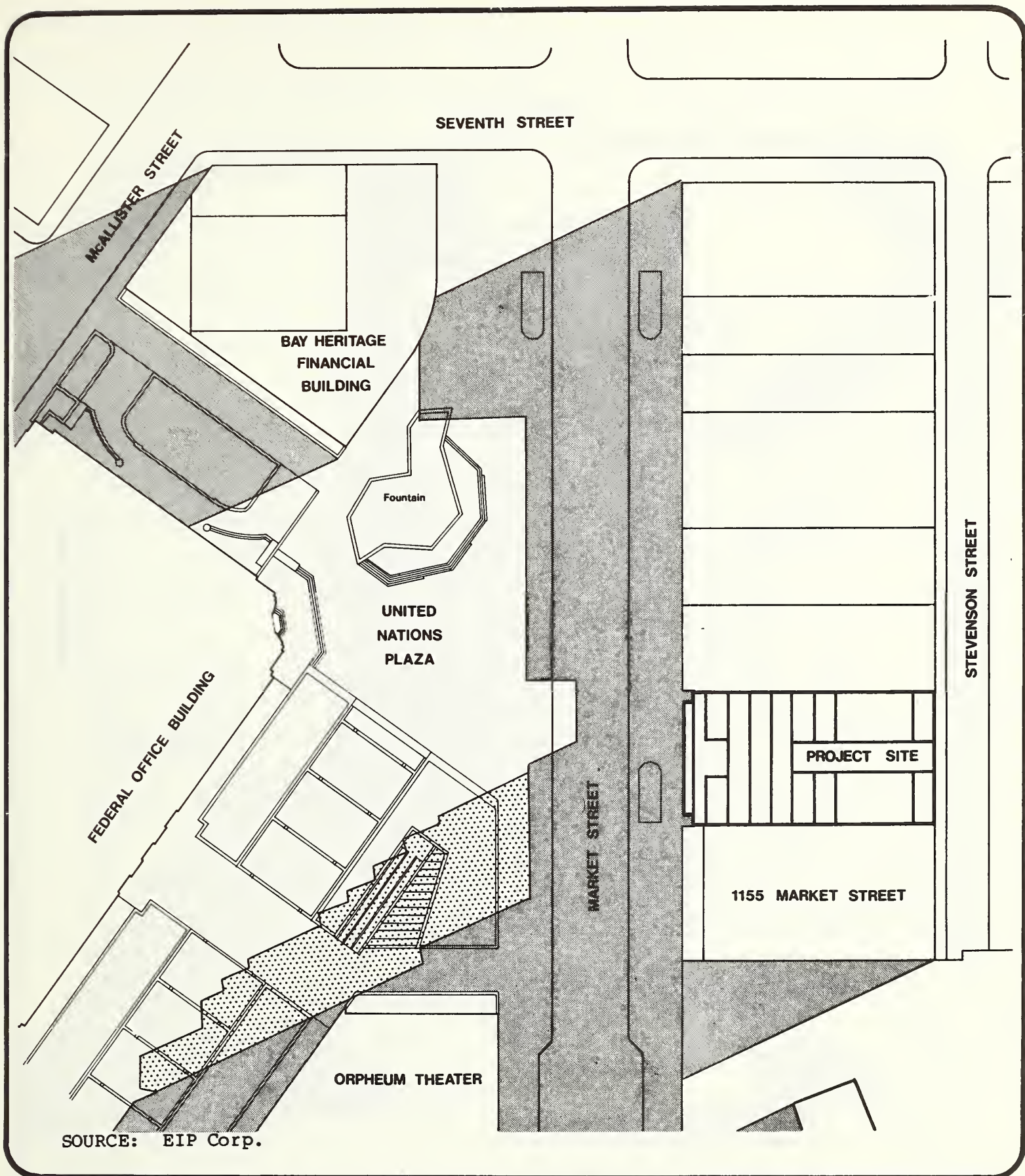
## Shadow Patterns June, 10 am

-  Existing Shadows
-  Shadows added by Proposed Project



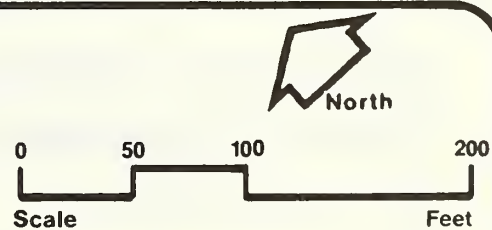
**Figure No. 12**





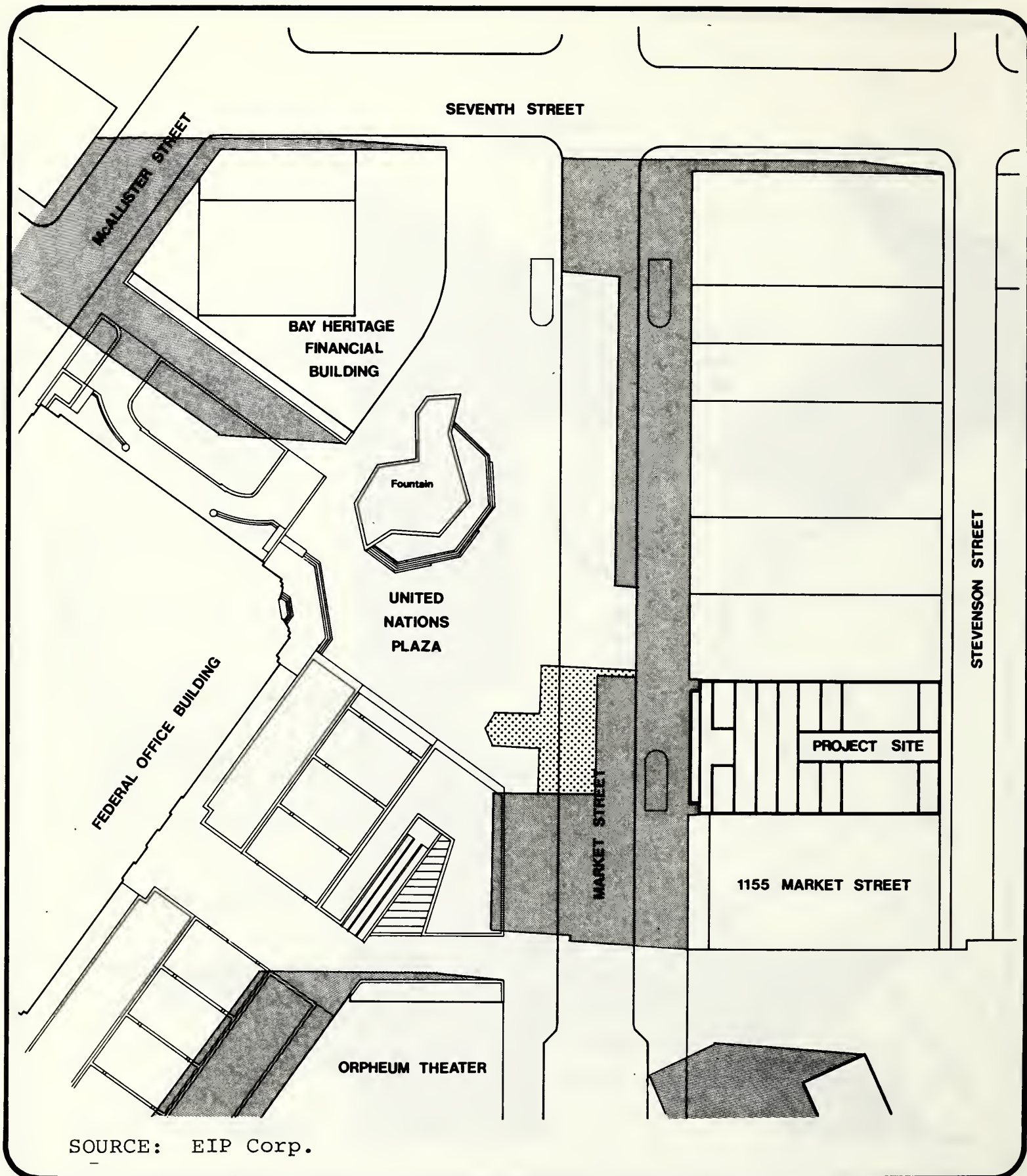
## Shadow Patterns March/September, 8am

- Existing Shadows
- Shadows added by Proposed Project





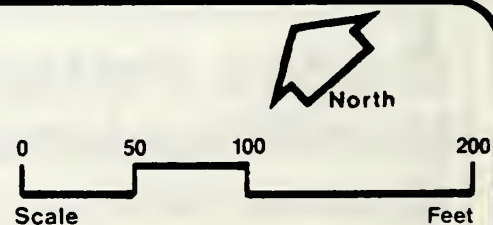
**Figure No.13**





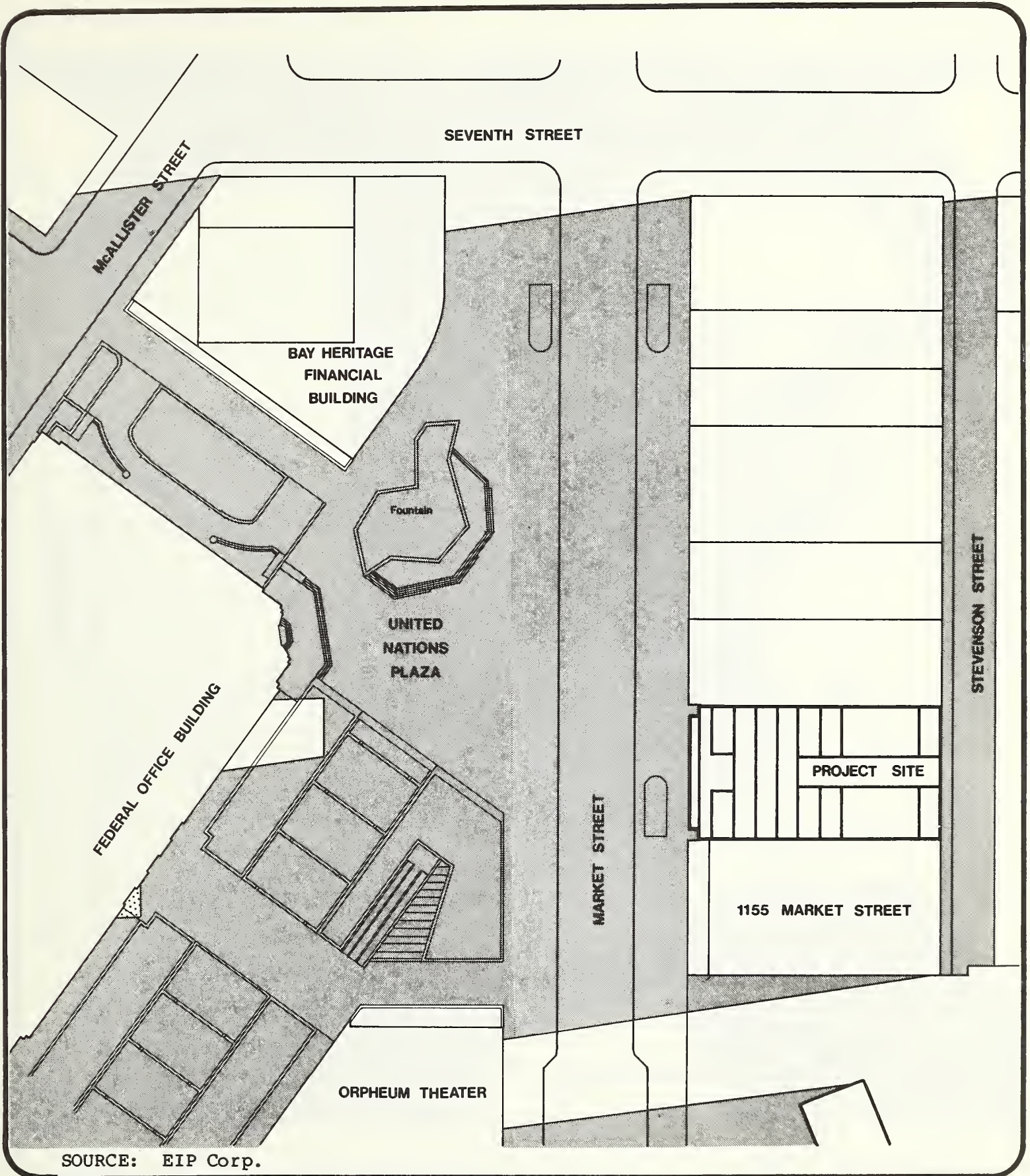
## Shadow Patterns March/September, 10 am

-  Existing Shadows
-  Shadows added by Proposed Project



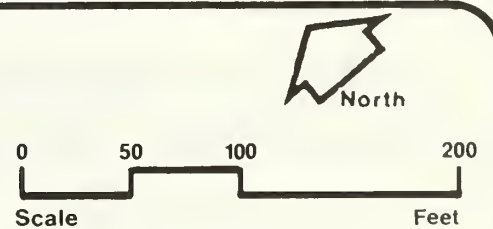
**Figure No. 14**





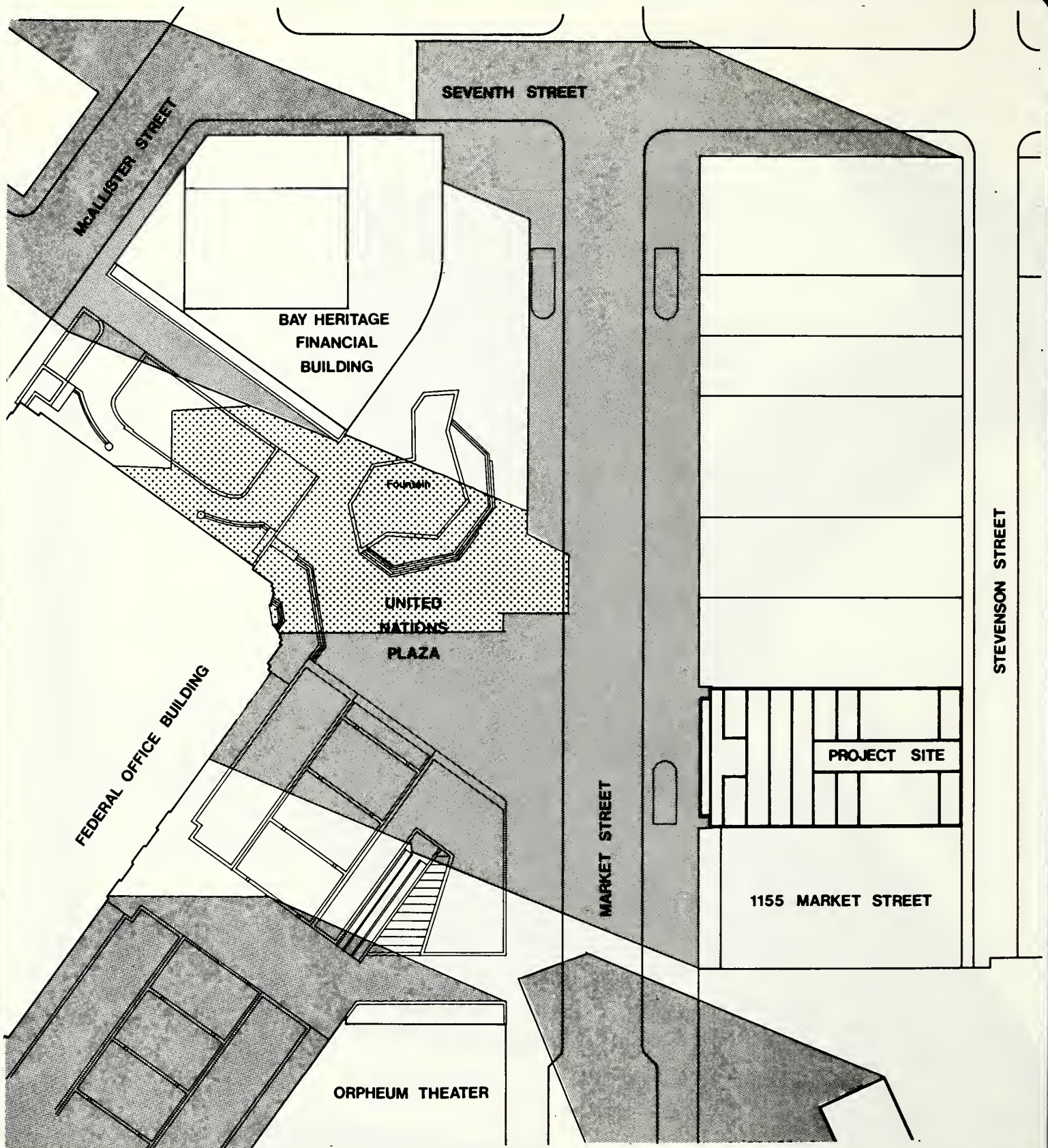
## Shadow Patterns December, 8am

- Existing Shadows
- Shadows added by Proposed Project



**Figure No. 15**

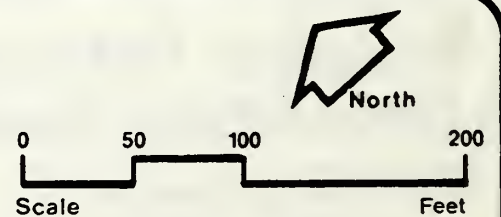




SOURCE: EIP Corp.

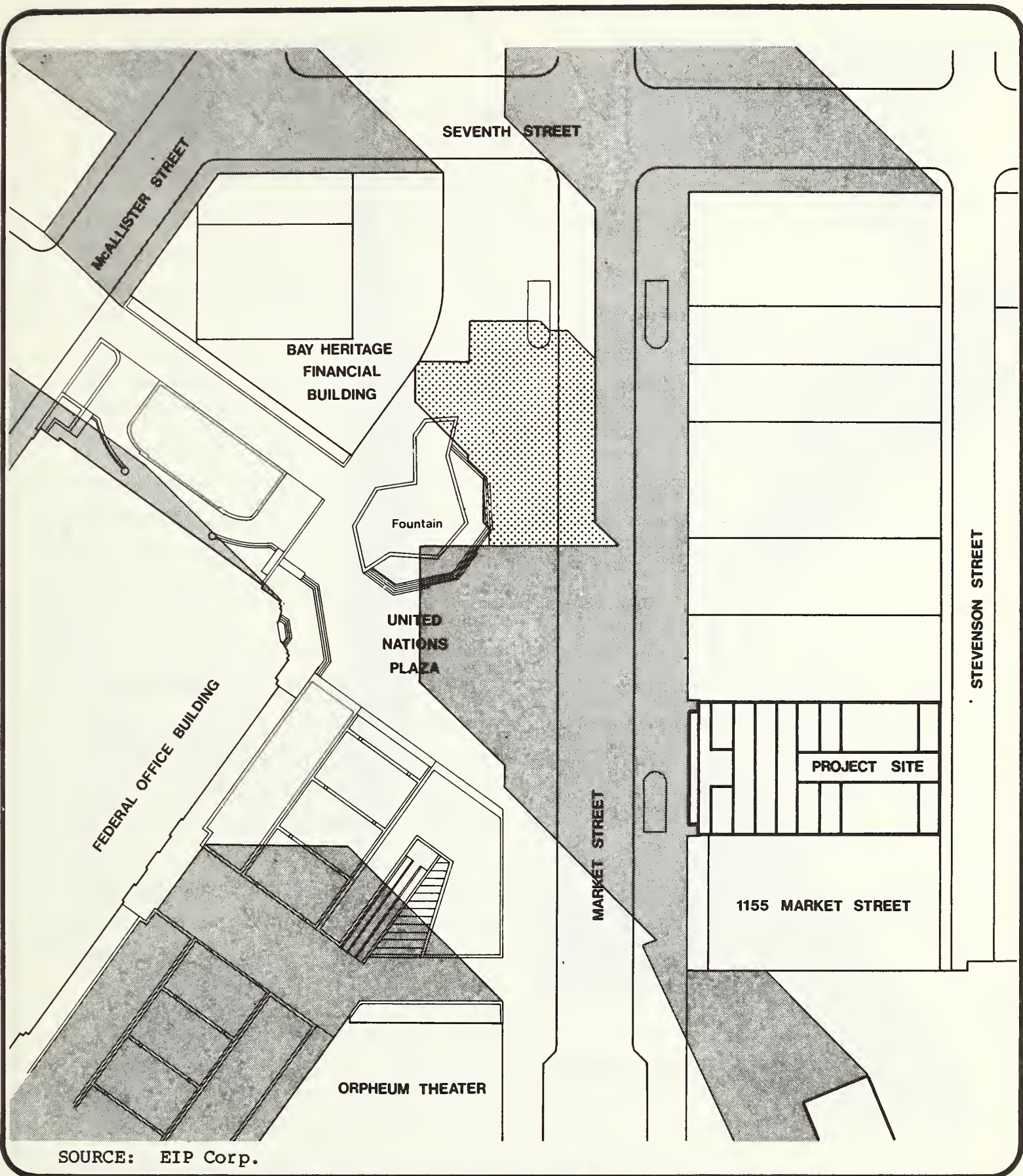
## Shadow Patterns December, 10 am

- ☐ Existing Shadows
- ☒ Shadows added by Proposed Project





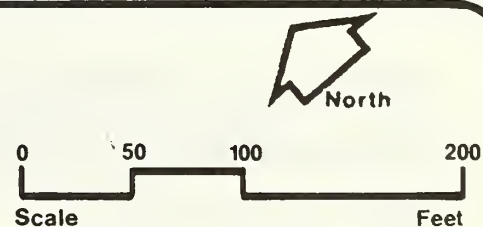
**Figure No. 16**





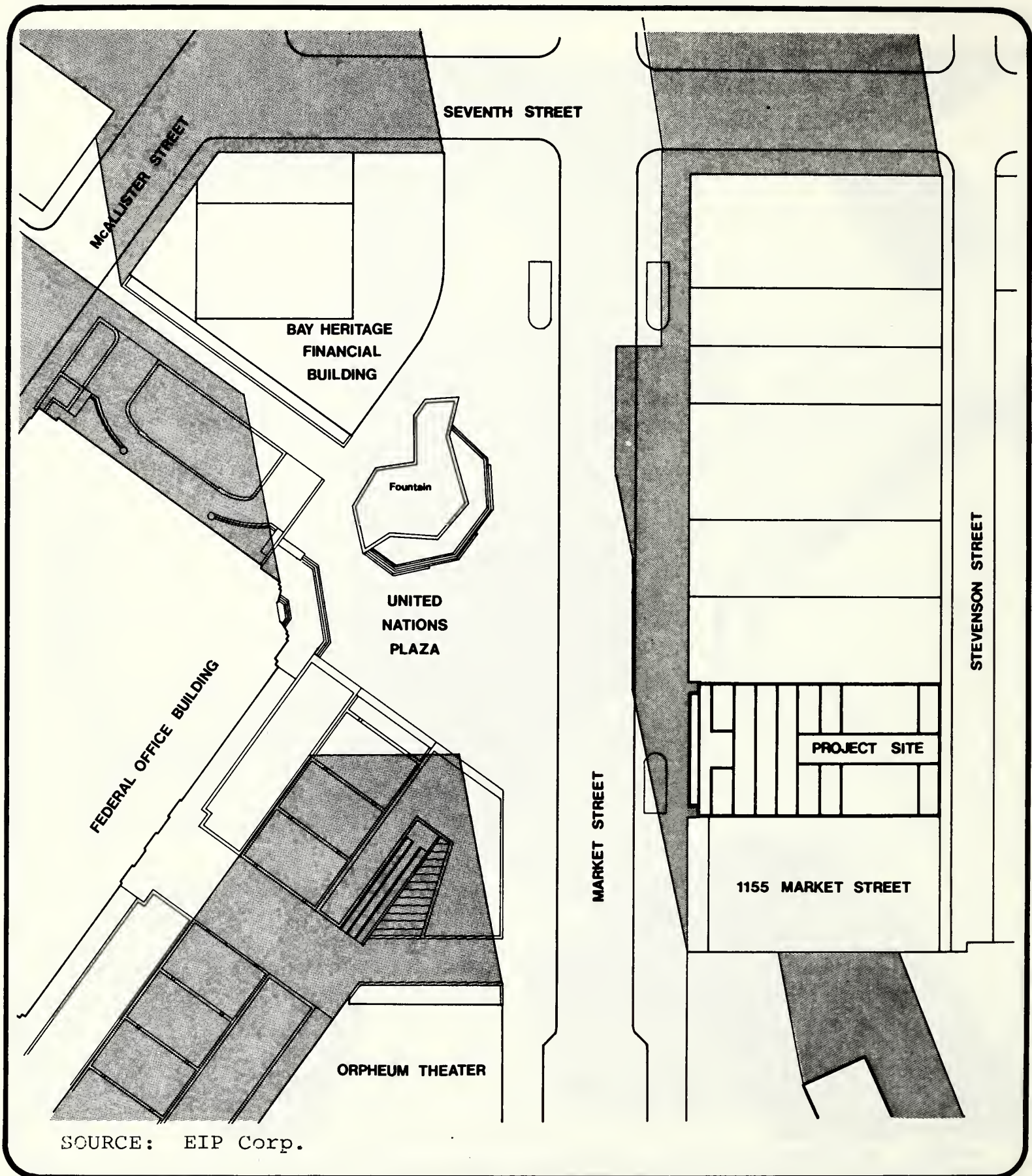
## Shadow Patterns December, 12 noon

-  Existing Shadows
-  Shadows added by Proposed Project





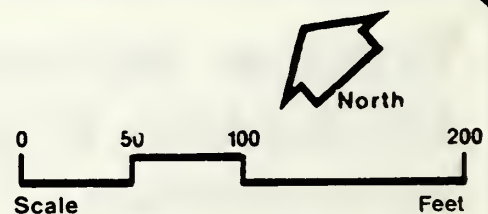
**Figure No.17**





## Shadow Patterns December, 2 pm

-  Existing Shadows
-  Shadows added by Proposed Project



**Figure No. 18**



project site and 82 dBA or above within 800 feet of the project site. Indoors, in adjacent buildings with windows open, noise levels during pile driving would be reduced 10 to 15 dBA; with windows closed, noise levels during pile driving would be reduced by 20 to 25 dBA. Vibrations from the impact of the diesel hammer used to drive the piles would be felt in nearby buildings.

Land uses in the site vicinity include office space, retail service establishments, a public plaza and residential uses (Trinity Apartments). The buildings in the project area are primarily older structures which rely on open windows for ventilation. Indoor noise levels during pile driving could be as high as 90 dBA with windows open and 80 dBA with windows closed. Noise levels of this intensity would annoy and distract residents, employees and customers and prevent sleep. Generally, noise levels above 60 dBA interfere with normal speech. Vibrations from pile driving would also affect workers in the site vicinity and residents of Trinity Apartments. These vibrations have been found to be more disturbing to some people than the noise levels.

Noise measurements of pile driving activities at the 1155 Market Street site, adjacent to the proposed project site, were conducted by the San Francisco Department of Public Works in response to complaints of high pile driving noise levels from occupants of nearby office buildings and the Trinity Plaza Apartments at the southeast corner of the intersection of Market and 8th Streets. At 100 feet from the pile driver, measurements of 97 dBA were recorded in violation of the San Francisco Noise Ordinance.<sup>1</sup> As a result, the hours during which pile driving was permitted were regulated to between 7:00 a.m. to 11:30 a.m., and 1:30 p.m. to 6:00 p.m. to avoid high noise levels during the noon lunch hour and morning and evening hours. Complaints decreased after the hours of pile driving were restricted.

After project completion, project-generated noise would be limited to traffic and mechanical equipment noise. The City noise ordinance requires that noise from mechanical equipment not exceed 60 dBA day and 55 dBA night (10 p.m.-7 a.m.) at the property line.<sup>2</sup> Noise associated with building operations would not increase noise levels above those currently at the site. Traffic generated by the project during any hour of the

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<sup>1</sup>Ed Sherrod, Assistant to the Mechanical Engineer, San Francisco Department of Public Works, Mechanical Engineering Section, telephone communication, April 6, 1982.

<sup>2</sup>San Francisco Municipal Code, Ordinance 294-72, Section 2909, Fixed Source Noise Levels.

day would cause traffic noise levels to increase by less than 1 dBA, which would not be perceptible to the untrained human ear. No noise effects from project traffic would be expected.

The City of San Francisco has developed methods to reduce pile driver noise impact. Under the Noise Ordinance (Section 2907c) impact tools and equipment must have intake and exhaust mufflers which accomplish maximum noise attenuation, as approved by the Director of Public Works. The Director may require additional means of accomplishing maximum noise attenuation, such as specification of a relatively quiet pile driver to be used, predrilling of pile holes, and specification of hours of operation to reduce the number of people exposed to the noise.

The San Francisco Noise Ordinance (Section 2907b) limits noise emissions from any powered construction equipment, with the exception of impact tools, to 80 dBA at a distance of 100 feet. Adherence to this limit would ensure that general construction equipment would cause noise levels not to be appreciably higher than present maximum noise levels due to traffic.

The Environmental Protection Element of the San Francisco Comprehensive Plan contains guidelines for determining the compatibility of various land uses with different noise environments. For the site's 70 to 75 dBA noise level, the guidelines state that new office development should be undertaken only after an acoustical analysis has been performed and needed noise insulation features included in the building design, which would be accomplished by the project sponsor.

9. <u>Utilities and Public Services</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
Would the proposed project have an effect upon, or result in a need for, new or altered governmental services in any of the following?					
a. fire protection	—	—	<u>X</u>	—	<u>X</u>
b. police protection	—	—	<u>X</u>	—	<u>X</u>
c. schools	—	—	<u>X</u>	—	—
d. parks or other recreational facilities	—	—	<u>X</u>	—	—
e. maintenance of public facilities	—	—	<u>X</u>	—	<u>X</u>
f. power or natural gas	—	—	<u>X</u>	—	<u>X</u>



	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
g. communications systems	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>
h. water	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>
i. sewer/storm water drainage	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>
j. solid waste collection and disposal	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>

The proposed project would increase the building area on the site and the number of persons using the project area and may increase the fire hazard. The project would, however, incorporate more extensive fire protection measures than the building currently occupying the site because more stringent code requirements are now in effect. The project would not require more fire department personnel or equipment. Stations 1 (416 Jessie Street), 3 (1067 Post Street) and 36 (109 Oak Street) would serve the project site. Response time would be approximately 3 minutes from Station 3, and 4 minutes for Stations 1 and 36.<sup>1</sup> Cumulatively, if more than one 2 or 3-alarm fire breaks out in an area the fire department would be stretched thin because the department also must maintain fire protection for the rest of the city.

Since the proposed office building classifies as a high rise by the Fire Department (exceeds 75 feet in height), a fire safety director would be required at the building who would be trained in building evacuation and safety through a fire protection course provided by the Bureau of Fire Prevention.

The project area is patrolled regularly by the San Francisco Police Department by radio car and supplementary foot patrols. The project site is within Southern District reporting area 604, which is comprised of the area between Market and Howard and Sixth and Eighth Streets. For 1980, 2,239 incidents of crime were reported, ranking the area second in Southern District's 18 reporting areas. The proposed office building would increase population and personal property on the site, thereby increasing the incidence of crime. No off-street parking is provided; therefore, the project could also generate an opportunity for auto boosting and stripping. Additional manpower or equipment would not be required by the Police Department for the project. Cumulatively, office development could generate an increase in commercial crime in the area. However, a future relocation

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<sup>1</sup> Joseph Sullivan, Chief, San Francisco Fire Department, Planning and Research, telephone conversation, November 25, 1981.

of the Greyhound Bus Terminal to another area in the City, should relocation occur, could potentially reduce crime in the reporting area.<sup>1,2</sup>

There would be a net increase in the consumption of energy generated by the proposed development (see III, B.10. Energy, Natural Resources, page 64). PGandE does not anticipate difficulty in providing electricity and gas to the site.<sup>3</sup> The project would comply with Title 24 of the California Administrative Code regarding energy conservation standards.

The office building would use an estimated 19,000 gallons of domestic water per day (GPD). Domestic water is provided to the site through a 4-inch main on the south side of Stevenson Street. This main is of adequate size to serve the site.<sup>4</sup> Cumulatively, other development in the area could eventually require the existing four inch main to be enlarged to an eight inch main. There is an adequate supply of water to serve cumulative development in the project area. The San Francisco Water Department would be responsible for upgrading existing facilities to meet increased demand for water.<sup>5</sup>

The amount of wastewater generated by the project would be about the same as water consumed. A 10 inch diameter sewer pipe under Stevenson Street connects to a two feet, six inch by five feet, three inch sewer on Seventh Street. These facilities would be adequate to handle increased flows due to the project and cumulative development in the project area.<sup>6</sup> Wastewater is carried to the Northpoint Water Pollution Control Plant where sewage flows receive primary treatment.

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<sup>1</sup>Paul Libert, Sergeant, San Francisco Police Department, telephone conversation, December 16, 1981.

<sup>2</sup>James Farrell, Sergeant, San Francisco Police Department, Crime Analysis, telephone conversation, November 24, 1981.

<sup>3</sup>Herb Luders, Marketing Representative, PG&E, telephone conversation, December 7, 1981.

<sup>4</sup>Cy Wentworth, Water Estimator, San Francisco Water Department, telephone conversation, December 7, 1981.

<sup>5</sup>Cy Wentworth, Water Estimator, San Francisco Water Department, telephone conversation, April 6, 1982.

<sup>6</sup>Mervyn Francies, Engineering Associate, San Francisco Clean Water Program, telephone conversation, November 25, 1981. Nat Lee, Engineering Associate, Division of Sanitary Engineering, Department of Public Works, telephone conversation, April 6, 1982.

The proposed office building would generate about 1,500 pounds of solid waste each day (4 tons per week). The Golden Gate Disposal Company foresees no problem in meeting this demand to remove waste from the site. Fifty tons of office waste paper currently is recycled per day resulting from collections in the Financial District. This is in addition to the office paper purchased by paper recycling companies. Most of the solid waste generated by this project would be paper and would be recycled by the garbage collection company.<sup>1</sup>

There would be an increase in demand for communication systems generated by the proposed office building. Underground conduits located in Stevenson Street would be sufficient for Pacific Telephone to provide service to the proposed project.<sup>2</sup>

10. Energy and Natural Resources.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
Would the proposed project result in:					
a. Any change in consumption of energy?	<u>X</u>	—	—	—	<u>X</u>
b. Substantial increase in demand on existing energy sources?	—	—	<u>X</u>	—	<u>X</u>
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	—	—	<u>X</u>	—	—

The project would increase consumption of nonrenewable energy resources on the site. Site preparation and building construction would require, in direct and indirect energy use, about 40 billion BTUs<sup>3</sup> at-source of electricity, gasoline and diesel fuel over the entire construction period (At-source refers to adjustments made in energy use calculations to account for the energy used in generation, refining and transport of each of the energy sources.)<sup>4</sup>

<sup>1</sup> Fiore Garbarino, Office Manager, Golden Gate Disposal Company, telephone conversation, December 7, 1981.

<sup>2</sup> Mr. McGovern, Building Industry, Pacific Telephone and Telegraph, telephone conversation, December 8, 1981.

<sup>3</sup> BTU: British Thermal Unit. The quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at about 39 degrees Fahrenheit.

<sup>4</sup> Federal Energy Administration, Energy Use in the Contract Construction Industry, Report No. PB-245-422, U.S. Department of Commerce, February 18, 1975.



The project would use an average 285,000 kilowatt hours (KWH) of electricity and about 267,000 cubic feet of natural gas per month;<sup>1</sup> this would be about 700 BTUs at-source per square feet per day.

The project would be designed to comply with California Energy Commission Title 24 energy conservation standards and all state and local building and energy conservation codes.<sup>2</sup> Projected consumption of nonrenewable energy resources would be equivalent to the annual needs of about 250 households.

11. <u>Biology</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?	___	___	<u>X</u>	___	___
b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?	___	___	<u>X</u>	___	___
c. Would the project require removal of mature scenic trees?	___	___	<u>X</u>	___	___
12. <u>Cultural</u>					
Would the proposed project:					
a. Include or affect a historic site, structure, or building?	<u>X</u>	___	___	___	<u>X</u>
b. Include a building or any recognized list of buildings of architectural merit?	___	___	<u>X</u>	___	<u>X</u>
c. Include or affect a known archeological resource or an area of archeological resource potential?	___	___	<u>X</u>	___	___
d. Cause a physical change affecting unique ethnic or cultural values?	___	___	<u>X</u>	___	___

<sup>1</sup>Based on a comparison with the proposed building at 1155 Market Street (EE 81.25, Final Negative Declaration issued by the San Francisco Department of City Planning August 13, 1981.)

<sup>2</sup>California Energy Commission, Energy Conservation Standards for New Nonresidential Buildings, 1980.

The proposed project is adjacent to the Civic Center Historic District. The building design was derived to be compatible in scale, materials and configuration of the Market Street facade with the architecture of the Civic Center buildings.

The following list includes buildings in the project vicinity which have been studied for their architectural and/or historical importance.

The 1976 Department of City Planning survey of Architecturally Significant Buildings refers to an architectural survey of the top six percent of all buildings in the City conducted by the Department of City Planning between 1974 and 1976. Those buildings considered to have architectural value were rated as to the degree of architectural value from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context and overall environmental significance. In the estimation of the inventory participants, buildings rated "3" or better represent approximately the best 2% of the City's architecture.

The Heritage Survey Rating refers to a survey of downtown buildings located along Market Street and in the downtown financial and retail districts conducted by the Foundation for San Francisco's Architectural Heritage. Buildings constructed after 1945 were not rated. An "A" rating indicates the most important individual buildings, distinguished by outstanding qualities of architecture, historic and cultural value and relationship to environment. A "B" rating indicates buildings which are individually important for their overall quality, rather than for particular, outstanding characteristics.

A "C" rating indicates buildings which are distinguished by their scale, or architectural features.

The proposed project would not affect any building on the list.

<u>Project Block</u>	<u>DCP Survey Rating</u>	<u>Heritage Survey Rating</u>
6-26 Seventh St. (Odd Fellows Temple) <sup>1</sup>	3	A
1115-1117 Market St.	0	C
1125 Market St. (Embassy Theater) <sup>1</sup>	0	B
1127 Market St. (Strand Theater) <sup>1</sup>	1	C
<u>United Nations Plaza</u>		
1182 Market St. (Orpheum Theater) <sup>2</sup>	5	A
1 United Nations Plaza (Delectables Delicatessen)	4	B <sub>4</sub>
50 United Nations Plaza (Federal Building)	5	SL <sub>4</sub>
79 McAllister St.	4	SL <sub>4</sub>
83-91 McAllister St. (Cokesbury Book Store) <sup>1</sup>	4	SL <sub>4</sub>
<u>Seventh and Market Sts.</u>		
1095 Market St. (Grant Building) <sup>1</sup>	1	A <sub>4</sub>
99 Seventh St. (Post Office) <sup>3</sup>	5	SL <sub>4</sub>
1112 Market St. (Hotel Shaw) <sup>1</sup>	4	B

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<sup>1</sup>Included on the City Planning Commission's listing of "Architecturally and/or Historically Significant Buildings in the Downtown;" adopted by the City Planning Commission, Resolution No. 8600, May 29, 1980.

<sup>2</sup>The building has been designated as an official City landmark.

<sup>3</sup>Listed in the National Register of Historic Places.

<sup>4</sup>SL means secondary listing. The Heritage Survey did not rate buildings located beyond the Market Street frontage in this area, but did list buildings considered to have architectural importance.



13. <u>Hazards.</u> Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	___	___	<u>X</u>	___	___
b. Creation of or exposure to a potential health hazard?	___	___	<u>X</u>	___	___
c. Possible interference with an emergency response plan or emergency evacuation plan?	___	___	<u>X</u>	___	___

It is not anticipated that the proposed project would result in any increased risk of explosion or release of hazardous substances.

The City's emergency response plan provides for a "command post" to be established at the Central Fire Department located near City Hall where a line of communications between utilities and services would be set up to keep agencies advised as to the locales and severity of problems during emergency or disaster conditions.

An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building permits.

C. MITIGATION MEASURES:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Are mitigation measures included in the project?	<u>X</u>	<u>      </u>	<u>X</u>
Are other mitigation measures available?	<u>      </u>	<u>X</u>	<u>X</u>

The project sponsor has incorporated a number of mitigation measures into the project which they consider to be reasonable and appropriate.

(a) Transportation, Circulation

- The project sponsor would contribute to a fund for maintaining and augmenting transportation service, in an amount proportionate to the demand created by the project, through an equitable funding mechanism, if implemented by the City, such as an assessment district or impact fee which would meet the peak demand generated by cumulative office development in the downtown area.
- The project sponsor would encourage transit use by employees in the proposed building by including the sale on-site of BART and Muni passes, and promoting an employee carpool/vanpool system in cooperation with RIDES for Bay Area Commuters, or other such enterprises.
- The project sponsor would, in consultation with the Department of City Planning, request tenant firms to implement a flexible time system for employee working hours. The sponsor would (within a year of certification of occupancy being issued) report to the Department of City Planning on the success of such efforts.
- Within a year from completion of the project, the project sponsor would conduct a survey in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants, and actual pick-up and drop-off areas for carpoolers and vanpoolers. This survey would be made available to the Department of City Planning. Alternatively, at the request of the Department of City Planning, the project sponsor would provide an equitable in-lieu contribution for an overall survey of the downtown area to be conducted by the City.
- The project sponsor would participate in any future areawide study of current parking conditions and future needs. If new short-term (or long-term) parking

is appropriate in the downtown area, the project sponsor would participate in the equitable funding of such facilities through a special assessment district according to criteria determined by the study.

- The project sponsor would ensure that safe and convenient pedestrian access be maintained throughout the construction period on designated walkways around the project site.
- The project sponsor would require as part of the general construction contract that no vehicular construction traffic enter or leave the project site before 9:00 a.m. or after 4:00 p.m. to minimize conflicts with peak-hour traffic.
- The project sponsor would coordinate street excavation with construction contractors on any concurrent nearby projects to minimize cumulative traffic impacts.
- The project contractor would provide off-street parking for construction workers on the project site, or at an off-site location with jitney service to the site.
- The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering and with the Office of Environmental Review to determine other feasible construction traffic mitigation measures satisfactory to all parties.
- Eyebolts to support future Muni electrification wires would be incorporated into the project.
- The project sponsor would establish a parking validation program for visitors to the proposed project in coordination with existing parking facilities, or those that may be newly constructed within 800 feet of the project site.
- The project sponsor would provide building directories and visual aids indicating the location of the elevators in the loading area of the building.



(b) Visual Quality and Urban Design

- The proposed Market Street building wall setback at 85 feet would create visual continuity between the project and other buildings in the area including the Civic Center buildings, Orpheum Theater, the Bay Heritage Financial Building and the Odd Fellows Temple. The height and spacing of the building columns would be similar to those of the Federal Building and allow light and shadow to be cast against the Market Street face of the structure, increasing visual interest. The concrete exterior of the structure would be light grey in color, similar to the Federal Building.

(c) Population, Employment, Housing

- The project sponsor would fully mitigate the housing demand of 123 dwelling units generated by the proposed project. To date, 88 units have been accepted by the City to meet a portion of the demand.<sup>1</sup> The remaining 35 unit demand would be provided by the project sponsor through one of the following: 1) new construction of dwelling units; 2) rehabilitation of vacant residential units as accepted by the City; 3) monetary contribution in the City's Mortgage Bond Revenue Program.

(d) Soils, Geology

- Project excavation would be above the water table. During construction the pit would be shored where necessary to prevent slumping.
- The building would meet the requirements of the San Francisco Building Code for seismic design concerning the amount of allowable sway, the attachment of partitions and decorative elements, and the provision of emergency electricity and water services.

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<sup>1</sup>Letter from Dean Macris, Director of Planning, to Trinity Properties, February 25, 1982.

- Further geotechnical engineering investigations of the site would be done to determine soil characteristics; to recommend foundation pile type, pile bearing length and pile tip elevation; to predict expected settlement and possible differential settlement. Results and conclusions of these technical studies would be incorporated into the structural plans for the proposed building and all design recommendations by a licensed geotechnical engineer would be adhered to.

(e) Air Quality, Climate

- Those measures which would reduce vehicular traffic also would reduce air quality emissions impacts. These measures are described in part C.(a), above, page 62.
- An effective watering program (complete coverage twice daily) can reduce construction dust emissions by about 50%; the project sponsor would require the contractor to implement a twice-daily watering program, which would reduce the likelihood of airborne construction dust and particulates exceeding state and federal standards.

D. ALTERNATIVES:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Were other alternatives considered?	<u>X</u>	<u>      </u>	<u>X</u>

I. No Project

Under the no-project alternative, the Civic Center Plaza building would remain on the site and none of the effects of the project identified in this study would occur. The visual characteristics of the site would remain the same, and existing shadow patterns in the project area would remain the same. There would be no changes to pedestrian flow, no increase in transit ridership and no increase in parking demand for office space. Under the no-project alternative, the site would be left open for future development proposals consisting of design details different from that which is currently proposed.

## 2. Reduced Building Height and Design

Reducing the height of the building would require removing the stepped back upper floors from the project. From a visual standpoint, removing the stepped back upper floors would reduce the number of open-air balconies suitable for potted plant materials as decorative elements, and from a design standpoint would weaken a definition of the building's mid-section. Reducing the height of the building's base proportionately to the reduction of the structure's mid-section would serve to retain a scale relationship between these 2 portions of the structure, but the lower base would not relate to the height of the Civic Center buildings or Federal Office Building at the United Nations Plaza.

A lower structure on the project site of reduced gross floor area would reduce demands on public services, transportation systems, air quality, housing, and energy consumption proportional to the reduction of gross floor area compared to the project as proposed. A lower structure maintaining the permitted maximum 145,200 gross square feet of floor area would create a building more rectangular in vertical form than the project as proposed. Such a structure would appear bulkier than the project as proposed, contain less visual interest and could increase shadows in the area.

Alternative building designs prepared by the project architects included schematic design schemes generally addressing details in the exterior shape of the building, height, window placement, exterior building materials and the location of pedestrian access points. In the opinion of the project architects and sponsor, the selected design proposed represents a combination of the above features that are most aesthetically appropriate to the setting and the arrangement of internal building spaces and use functions of greatest efficiency.

## 3. On-site Housing

The project as proposed would create a need for 123 dwelling units in San Francisco (see Section II. B.4., Population, Employment, Housing, page 31). Incorporating 123 units into the project would cause the proposed building to exceed the 10:1 floor area ratio of 145,200 square feet. Therefore, in order to accommodate the required housing on-site within the floor area ratio limitation, it would be necessary to reduce the amount of office space in the project resulting in fewer office employees and a reduction of required housing units.



Allowing for 89,000 gross square feet of office space would generate a demand for 78 dwelling units which could be accommodated on the site at about 720 gross square feet average each. Required parking would be 20 spaces<sup>1</sup> and would be accommodated in a second basement level, as added to the basement level currently proposed for utilities and storage. Under this alternative, there would be no need to increase the 189-foot, six inch building height as proposed because the gross square footage of the structure would remain the same. Therefore, shadows cast by the structure would remain the same. Average daily traffic on adjacent streets resulting from the project as proposed would be reduced about 20% while project-generated peak hour traffic would be reduced about 25%. Peak hour traffic travel patterns of residents would be in opposite directions from office employee travel patterns. Dust generation and noise during construction would be greater than the project as proposed because excavation to a greater depth would be necessary to accommodate residential parking.

This alternative was rejected by the project sponsor because: (1) an additional bank of elevators would be required to serve the housing, creating 2 elevator banks (1 for office use and 1 for housing); (2) reducing interior square footages and increasing housing and office leasing costs would ultimately reduce sales and leasing potential. Also, separate plumbing and energy systems would be required (one for office use and one for housing), necessitating additional mechanical space and increasing costs while reducing leasable floor area. Excavating two basement levels may prove to be difficult because of the proximity of the BART tunnel.

#### 4. Guiding Downtown Development

The Department of City Planning issued Guiding Downtown Development<sup>2</sup> which contains a series of regulatory proposals for managing development in downtown San Francisco. The proposals concern the size, design, and location of major buildings and address the impacts new development could have on housing, transportation, open space, architecturally significant older buildings, and the general environment and livability of the central business district.

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<sup>1</sup>Current zoning in the C-3 districts requires 1 off-street parking space for every 4 dwelling units.

<sup>2</sup>Resolution 8982 (adopted by the City Planning Commission, June 4, 1981) requires an alternative building proposal that would comply with the proposed controls contained in Guiding Downtown Development. Alternatives 6 and 7 address this Resolution.

The proposed project would generally conform to the regulatory proposals of Guiding Downtown Development. An exception would be the absence of public open space (4,840 square feet of open space would be required under Guiding Downtown Development guidelines for the project) and the proposed 10:1 Floor Area Ratio (FAR) which is allowed under current C-3-G zoning; Guiding Downtown Development calls for a maximum base FAR of 8:1 (page 3) in the C-3-G zone with an additional .5 FAR allowed for ground floor retail. An 8.5:1 FAR would yield a structure containing 123,420 gross square feet, 21,780 gross square feet less than the structure as proposed. The proposed 8,000 square feet of ground floor commercial space would allow for 115,420 square feet of office space. This would require a building containing 1½ fewer floors. The impacts of the smaller structure would be similar to but reduced from the proposed project since the alternative would have 15% less floor space than the proposed project. Accordingly, there would be less traffic generated as a result of the project and there would be proportionately fewer impacts on transportation services, parking facilities and the street network, because there would be fewer employees in the building. There would be less energy consumed to construct and operate the building, and there would be less demand (about 20) units for housing than the project as proposed. A shorter building would not preclude designing building setbacks at upper floors beginning at the 85 foot level; however, a shorter structure would more closely approximate the 11-story height of the 1155 Market Street Building currently under construction on the adjacent lot west of the project site. The project would not provide housing on the site as suggested in Guiding Downtown Development (page 17), but would provide housing off the project site in other locations. If housing were to be provided on the project site within the proposed structure, it would be the project sponsor's intent to design the building to conform to the height and bulk restrictions of Guiding Downtown Development. With a base FAR of 8:1, the project could add a maximum of 4:1 for housing so as not to exceed the overall maximum FAR of 12:1. Any retail use would have to be included within the 12:1 overall maximum FAR. A structure with a 12:1 FAR on the project site would contain 174,240 gross square feet, about 29,000 gross square feet more than the project as proposed. Such a structure would contain two full floors more than the proposed project. The impacts for this alternative would be similar to but greater than the proposed project and above 8.5:1 alternative because of the increased floor area by 17% or 30%, respectively. Assuming a mixed use building of greater size than the project as proposed, the 8,000 gross square feet of proposed ground floor commercial space would allow for 166,240 gross square feet of office and housing space. Allowing for 90,000 gross square feet of office space would

generate a demand for 80 dwelling units which could be accommodated on the site at 953 gross square feet average each. From a visual standpoint, two additional floors covering the area of the lot would require stepping back the building's upper stories at a level approximately 20 feet higher than the 85 foot height level proposed. The mass and bulk of the structure fronting Market Street would be greater than other buildings in the project area, including buildings around the United Nations Plaza. Shadow impacts on the United Nations Plaza and Market Street would be greater than the project as proposed. Other impacts would be as discussed under Alternative 3 (page 66), On-site Housing. The proposed project would meet the provisions of the current Planning Code.

E. MANDATORY FINDINGS OF SIGNIFICANCE:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<u>          </u>	<u>    X    </u>	<u>          </u>
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<u>          </u>	<u>    X    </u>	<u>          </u>
3. Does the project have the possible environmental effects which are individually limited, but cumulatively considered? (Analyze in the light of past projects, other current projects, and probable future projects?)	<u>          </u>	<u>    X    </u>	<u>          </u>
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	<u>          </u>	<u>    X    </u>	<u>          </u>
5. Is there a serious public controversy concerning the possible environmental effect of the project?	<u>          </u>	<u>    X    </u>	<u>          </u>



On the basis of this initial evaluation:

\_\_\_\_\_ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

  X   I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers a-e, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

\_\_\_\_\_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Robert W. Passmore  
Assistant Director-Implementation

for

Dean Macris  
Director

Date: 5/17/82

TABLE B-1

LEVELS OF SERVICE DEFINITIONS<sup>1</sup>  
FOR SIGNALIZED INTERSECTIONS**Level of Service A**

Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.

**Level of Service B**

Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.

**Level of Service C**

Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally must have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.

**Level of Service D**

Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.

**Level of Service E**

Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.

**Level of Service F**

Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.

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<sup>1</sup>City and County of San Francisco, Department of Public Works, Traffic Engineering Division.

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TABLE B-2

PEDESTRIAN FLOW REGIMES

<u>Flow Regime</u>	<u>Walking Speed Choice</u>	<u>Conflicts</u>	<u>Average Speed Rate (P/F/M)<sup>1</sup></u>
Open	Free Selection	None	0.5
Unimpeded	Some Selection	Minor	0.5 - 2.0
Impeded	Some Selection	High Indirect Interaction	2.0 - 6.0
Constrained	Some Restriction	Multiple	6.0 - 10.0
Crowded	Restricted	High Probability	10.0 - 14.0
Congested	All Reduced	Frequent	14.0 - 16.0
Jammed	Shuffle Only	Unavoidable	16.0+

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<sup>1</sup>P/F/M - Pedestrians per foot of sidewalk width per minute.

Source: Boris Pushkarev and Jeffrey M. Zupan, Urban Space for Pedestrians, Massachusetts, MIT Press, 1975.

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TABLE B-3

MUNI RIDERSHIP DATA DURING  
P.M. PEAK HOUR - OUTBOUND FROM CBD

(Muni Lines Within 2,000 Feet - Two to Three Blocks - of Project Site)

Line	PATRONAGE			LOAD FACTORS <sup>1</sup>		
	Existing Patronage	Projected Without Project <sup>2</sup>	Projected With Project <sup>2</sup>	Existing	Projected Without Project <sup>2</sup>	Projected With Project <sup>2</sup>
5	981	1,511	1,518	0.94	1.44	1.45
6	544	838	842	0.84	1.29	1.30
7	407	627	630	0.77	1.18	1.19
8	657	1,012	1,017	0.74	1.14	1.15
9	468	721	724	0.89	1.36	1.37
11	184	283	284	0.64	0.98	0.98
12	451	695	698	0.85	1.31	1.32
14	1,038	1,599	1,607	0.92	1.41	1.42
14GL	205	315	316	0.71	1.09	1.09
14x	344	489	491	0.68	0.96	0.96
16x	388	582	585	0.73	1.10	1.11
19	379	568	571	0.65	0.98	0.99
21	643	991	996	0.85	1.30	1.31
25	420	630	633	0.87	1.31	1.32
26	320	480	482	0.83	1.25	1.25
31	657	946	951	1.07	1.54	1.55
41	184	260	261	0.43	0.60	0.60
66	555	833	837	0.77	1.16	1.17
71	447	689	692	1.10	1.68	1.69
72X	425	638	641	0.90	1.35	1.36
J	909	1,400	1,407	0.84	1.28	1.29
K,L,M,N	5,725	8,820	8,862	0.96	1.47	1.48

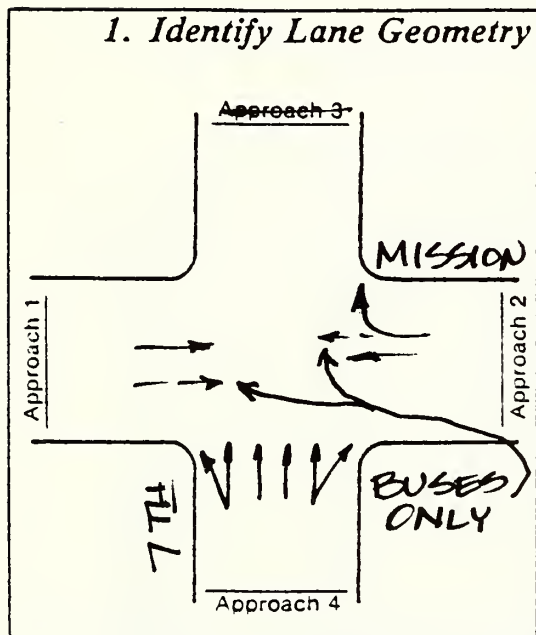
<sup>1</sup> A load factor of 1.00 reflects full capacity ridership at 150% of the available vehicle seats on buses and 220% of available seats on Muni Metro vehicles, (lines J through N).

<sup>2</sup> Projections include patronage from downtown and South of Market area projects under construction, approved or under formal review as of January 27, 1983.

Source: Capacity, patronage (without project) and load factors (without project) obtained from Gail Bloom, Transportation Planner, Department of City Planning, personal communication, December 1982.

## INTERSECTION CAPACITY ANALYSIS

4:30 - 5:30

Intersection MISSION / 7THDesign Hour P.M. PEAKOther Conditions EXISTING TRAFFIC (COUNTED 1/8/81)

**4. Left Turn Check**

	Approach			
	1	2	3	4
a. Number of change intervals per hour				
b. Left turn capacity on change interval, in vph				
c. G/C Ratio				
d. Opposing volume in vph				
e. Left turn capacity on green, in vph				
f. Left turn capacity in vph (b + e)				
g. Left turn volume in vph				
h. Is volume > capacity (g > f)?				

**6b. Volume Adjustment for Multiphase Signal Overlap**

Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph
2φ			

**2. Identify Volumes, in vph**

**5. Assign Lane Volumes, in vph**

**7. Sum of Critical Volumes**

690 + 315 + 0 + 0 = 1005 vph

**8. Intersection Level of Service**

B

Notes:

**3. Identify Phasing**

→	A1A2
↶	A4B3

A1 →	A3 ↓	B1 ↶	B3 ↷
A2 ←	A4 ↑	B2 ↷	B4 ↶

**6a. Critical Volumes, in vph (two phase signal)**

**Service Level Ranges**

Level	Sum of Critical Volumes		
	2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

# INTERSECTION CAPACITY ANALYSIS

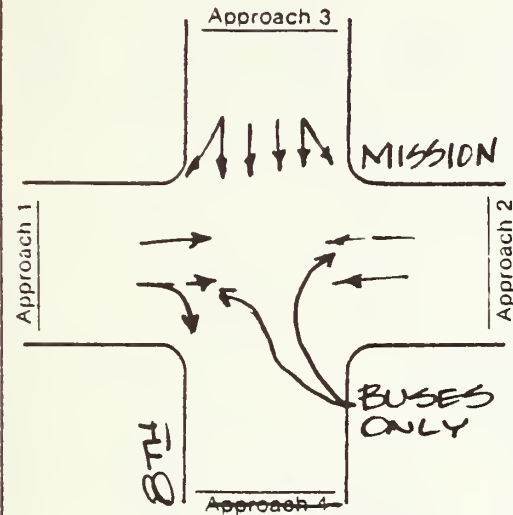
4:30 - 5:30

Intersection MISSION / 8TH

Design Hour P.M. PEAK

Other Conditions EXISTING TRAFFIC (COUNTED 2/9/81)

## 1. Identify Lane Geometry



## 4. Left Turn Check

- Number of change intervals per hour
- Left turn capacity on change interval, in vph
- G/C Ratio
- Opposing volume in vph
- Left turn capacity on green, in vph
- Left turn capacity in vph (b + e)
- Left turn volume in vph
- Is volume > capacity (g > f)?

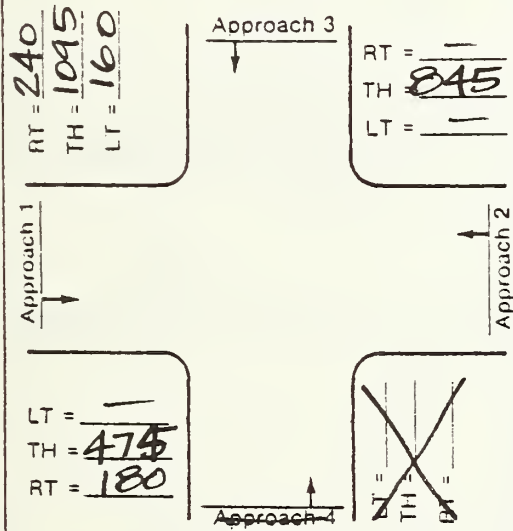
Approach	1	2	3	4

## 6b. Volume Adjustment for Multiphase Signal Overlap

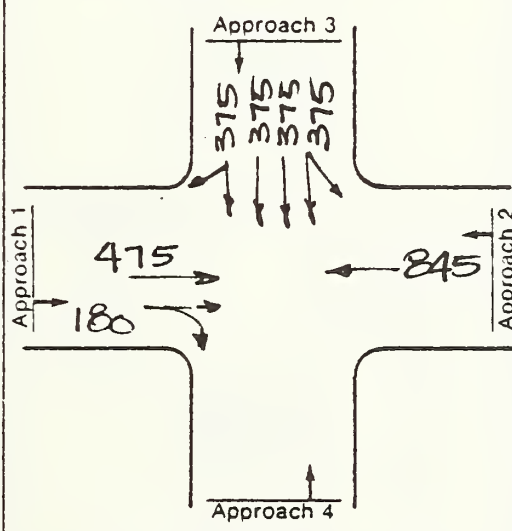
Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph
----------------	---------------------------------	--------------------------------	---------------------------------

2  $\phi$

## 2. Identify Volumes, in vph



## 5. Assign Lane Volumes, in vph



## 7. Sum of Critical Volumes

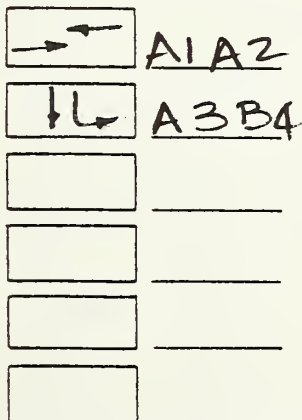
845 + 375 + 180 = 1220 vph

## 8. Intersection Level of Service

C-D

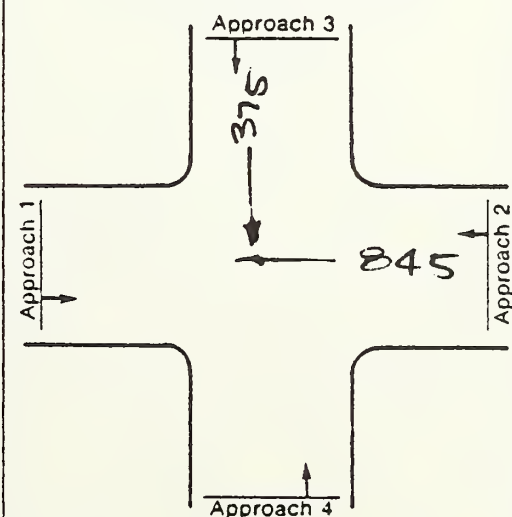
Notes:

## 3. Identify Phasing



A1 → A3 ↓  
A2 ← A4 ↑  
B1 ↖ B3 ↗  
B2 ↘ B4 ↙

## 6a. Critical Volumes, in vph (two phase signal)



## Service Level Ranges

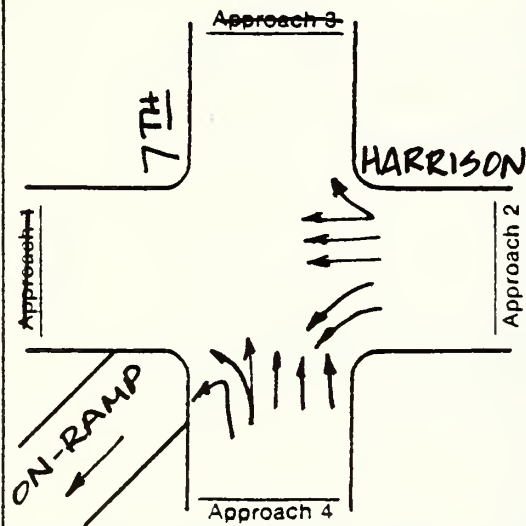
Level	Sum of Critical Volumes		
	2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		



# INTERSECTION CAPACITY ANALYSIS

Intersection HARRISON / 7TH / ON-RAMP Design Hour 4:30 - 5:30 P.M. PEAK  
 Other Conditions EXISTING TRAFFIC (COUNTED 1/5/81)

## 1. Identify Lane Geometry



## 4. Left Turn Check

- Number of change intervals per hour
- Left turn capacity on change interval, in vph
- G/C Ratio
- Opposing volume in vph
- Left turn capacity on green, in vph
- Left turn capacity in vph (b + e)
- Left turn volume in vph
- Is volume > capacity (g > 0)?

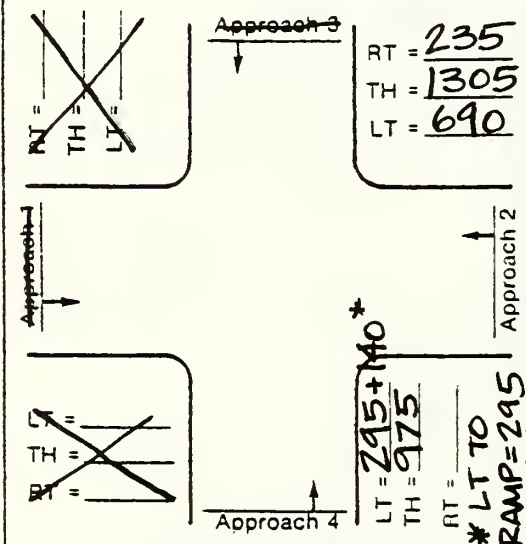
Approach			
1	2	3	4

## 6b. Volume Adjustment for Multiphase Signal Overlap

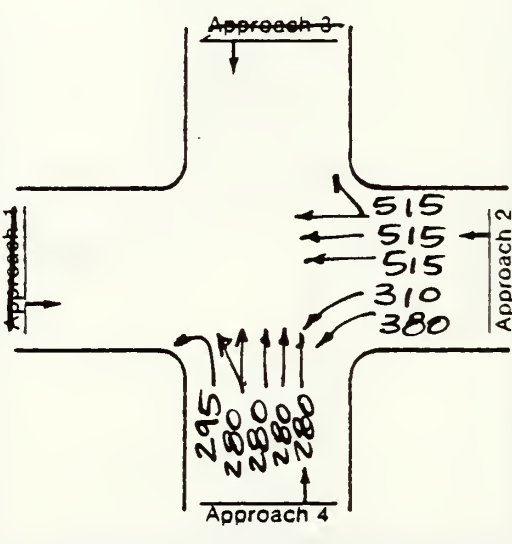
Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph
----------------	---------------------------------	--------------------------------	---------------------------------

20

## 2. Identify Volumes, in vph



## 5. Assign Lane Volumes, in vph



## 7. Sum of Critical Volumes

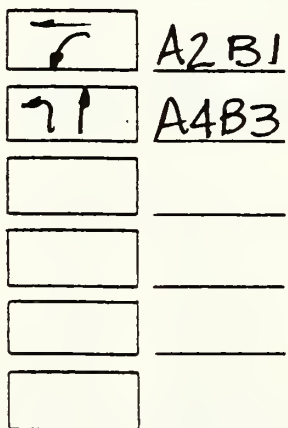
515 + 295 = 810 vph

## 8. Intersection Level of Service

A

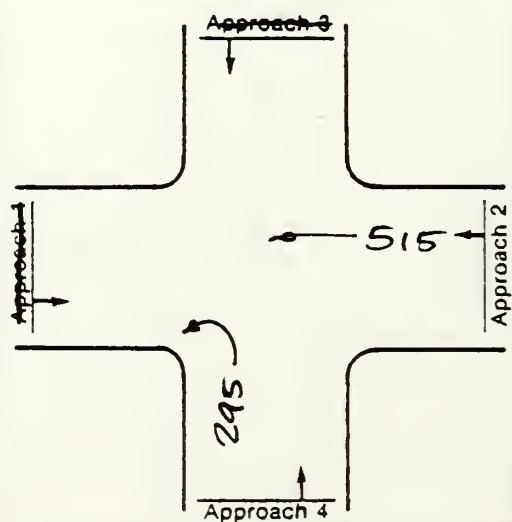
Notes:

## 3. Identify Phasing



A1 → A3 ↓  
 A2 ← A4 ↑  
 B1 ← B3 →  
 B2 → B4 ←

## 6a. Critical Volumes, in vph (two phase signal)



## Service Level Ranges

Level	Sum of Critical Volumes		
	2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

A-80

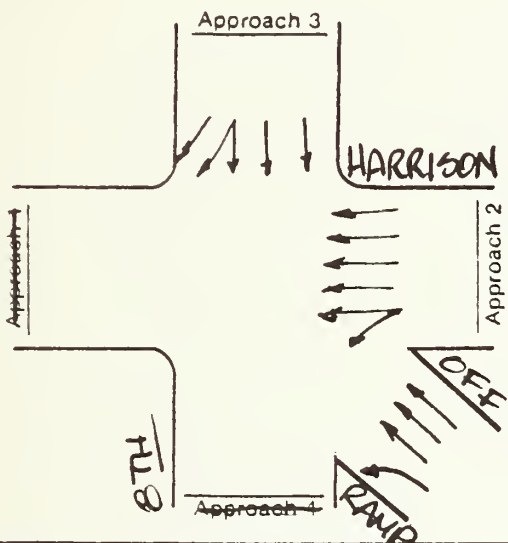
# INTERSECTION CAPACITY ANALYSIS

4:30 - 5:30

Intersection HARRISON / 8TH / OFF-RAMP Design Hour P.M. PEAK

Other Conditions EXISTING TRAFFIC (COUNTED 1/15/81)

## 1. Identify Lane Geometry



## 4. Left Turn Check

- Number of change intervals per hour
- Left turn capacity on change interval, in vph
- G/C Ratio
- Opposing volume in vph
- Left turn capacity on green, in vph
- Left turn capacity in vph (b + e)
- Left turn volume in vph
- Is volume > capacity (g > f)?

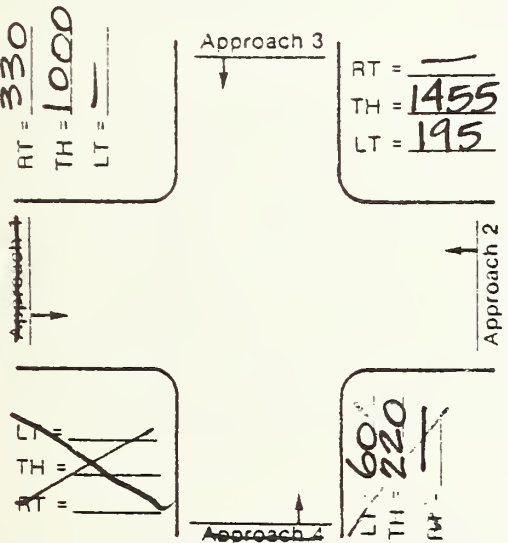
Approach

1 2 3 4

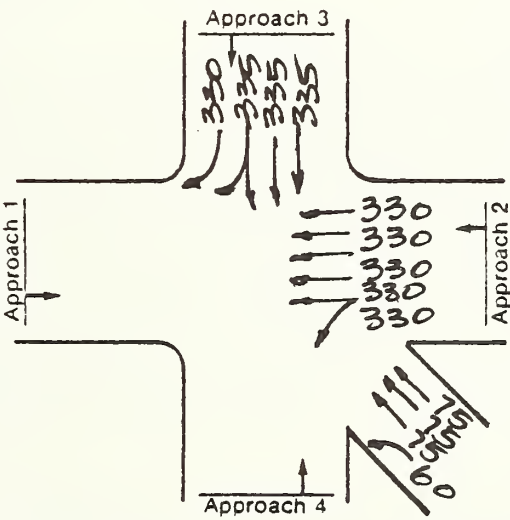
## 6b. Volume Adjustment for Multiphase Signal Overlap

Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph
3φ			

## 2. Identify Volumes, in vph



## 5. Assign Lane Volumes, in vph



## 7. Sum of Critical Volumes

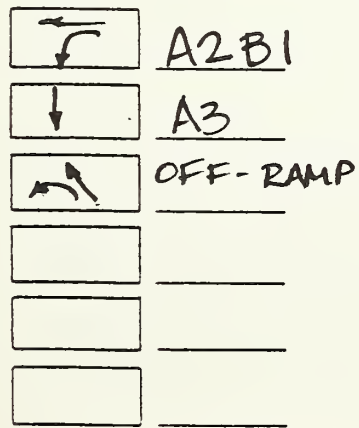
335 + 330 + 75 = 740 vph

## 8. Intersection Level of Service

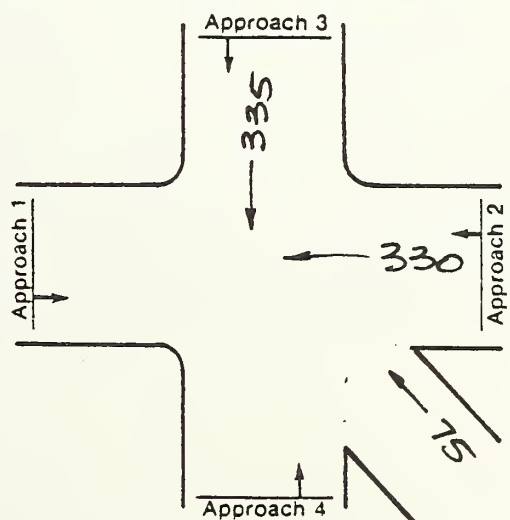
A

Notes:

## 3. Identify Phasing



## 6a. Critical Volumes, in vph (two phase signal)



## Service Level Ranges

Level	Sum of Critical Volumes		
	2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

A-81





## APPENDIX C

### CUMULATIVE TRANSPORTATION IMPACT ANALYSIS METHODOLOGY

#### I. Travel Demand

Travel demand from the 17.3 million gross square feet of net new cumulative office development and 589,210 gross square feet of net new cumulative retail development in downtown San Francisco has been estimated using a land-use approach for trip generation. Future travel into the downtown has been assumed to be a result of construction and occupancy of downtown office and retail space. The Office of Environmental Review of the Department of City Planning (DCP) has identified office projects in the greater downtown area as being under formal review, approved or under construction. Table D-1 in Appendix D shows the list of projects separated by review status and includes Assessor's Block number and DCP case number for each project. The information contained in this table represents the best data available from the Department of City Planning at the time of preparation of this document.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution are predicated on the assumption that housing would be available in the City. Thus, inclusion of residential projects would be double counting of project generated travel.

Projections of future travel have been made using trip generation rates of 17.5 person trip ends (one way trips) per 1,000 net leasable square feet or net new office space and 100 person-trips ends (pte) per 1,000 gross square feet of net new retail space.<sup>1</sup> Gross square feet of office space was converted to net leasable square feet by assuming an efficiency factor of 80%. The retail space has been assumed to be primarily "ground-floor retail" which would serve the office building users. Based upon survey data collected at the Embarcadero Center, approximately 45% of the travel generated by "ground-floor retail" uses has been assumed to be oriented to the office uses on-site and is already included in the office trip generation rate. Thus, 55% of the retail trip generation has been assumed to be "new" to each site.<sup>2</sup>

P.M. peak-hour travel from the cumulative development was assigned to modes of travel based upon the regional distribution and modal split shown in Table C-1, page . During the p.m. peak hour about 20% of the office travel and 10% of the retail travel was assumed to occur. Of the office travel approximately 90% (during peak hours) was assumed to be work-related and 10% was assumed to be other travel. On a daily basis, office travel was assumed to be 57% work-related and 43% other travel.<sup>3</sup>

To calculate vehicle trip ends, average automobile occupancies were assumed for each regional area based upon available data. Currently, commute travel to the East Bay is about 1.8 persons per vehicle; the North Bay is about 1.5 persons per vehicle; and to the Peninsula is about 1.2 persons per vehicle.<sup>4</sup> San Francisco auto occupancy was assumed to be 1.4 persons per vehicle.<sup>5</sup>

A basic assumption in all of the transportation analyses is that existing regional distributions and modal splits would continue into the future unchanged. Thus, the implicit assumption has been made that about 40% of the future employees would live in San Francisco. If housing is not available in the City then a greater impact than noted would result on the commute corridors into the City from the North Bay, East Bay and Peninsula. If housing is not available in the City, however, the impact on the Muni would be less than noted because City residents are the majority of Muni users.

## 2. Employment Trend Approach to Cumulative Analysis

In this and other San Francisco EIRs, a land-use type of approach has been used to estimate the transportation impacts of both the proposed project and cumulative development. An alternate type of approach is to forecast travel demand based upon regional projections of employment share (employment trend approach).<sup>6</sup> Briefly, the fundamental differences between (and limitations of) the two approaches are:<sup>7</sup>

The land-use approach (as it has been applied in this EIR) has used net new office space actually proposed, approved or under construction (less space in buildings demolished to make way for new buildings) as the basis for travel generation. The land-use approach assumes that literally all of the currently proposed development in the downtown area will be constructed and fully occupied within the time frame of the 1145 Market Street development and occupancy. No allowance has been made for less than 100% occupancy, for proposed developments that are never constructed, or for those which would not be occupied within the time frame of the proposed project.

TABLE C-1

## TRAVEL DISTRIBUTION AND MODAL SPLIT FOR CUMULATIVE ANALYSIS

<u>Geographic Area</u>	<u>OFFICE</u>					
	<u>Work Travel</u>		<u>Other Travel</u>		<u>Retail Travel</u>	
	<u>Geog. %1</u>	<u>Mode</u>	<u>Geog. %1</u>	<u>Mode</u>	<u>Geog. %1</u>	<u>Mode</u>
<u>SAN FRANCISCO</u>						
<u>Downtown/Northeast</u> (East of Van Ness, North of Market to the Embarcadero South of Market to I01)	7.0	Auto Muni BART Walk	33.0	Auto Muni BART Walk	84.0	Auto Muni BART Walk
		9.0 61.0 1.0 29.0		2.0 20.0 0.0 78.0		3.0 7.0 1.0 89.0
<u>Northwest</u> (Richmond, Marina Western Addition)	15.0	Auto Muni	11.0	Auto Muni	1.0	Auto Muni
		31.0 69.0		15.0 85.0		10.0 90.0
<u>Southwest</u> (Sunset, Parkside, Ingleside, Excelsior, Twin Peaks, and Upper Market)	13.0	Auto Muni BART	13.0	Auto Muni BART	2.0	Auto Muni BART
		29.0 62.0 9.0		12.0 59.0 19.0		10.0 80.0 10.0
<u>Southeast</u> (Potrero Hill, Bayview, Hunters Point, East and South of I01)	5.0	Auto Muni BART	7.0	Auto Muni BART	2.0	Auto Muni BART
		26.0 62.0 22.0		13.0 38.0 50.0		10.0 80.0 10.0
<u>PENINSULA</u> (San Mateo and Santa Clara Counties)	18.0	Auto Muni BART SamT SPRR	8.0	Auto Muni BART SamT SPRR	3.0	Auto Muni BART SamT SPRR
		44.0 3.0 19.0 7.0 27.0		50.0 0.0 30.0 10.0 10.0		25.0 0.0 25.0 0.0 50.0



TABLE C-1  
(continued)

TRAVEL DISTRIBUTION AND MODAL SPLIT FOR CUMULATIVE ANALYSIS

<u>Geographic Area</u>	<u>OFFICE</u>					
	<u>Work Travel</u>		<u>Other Travel</u>		<u>Retail Travel</u>	
	<u>Geog. %<sup>1</sup></u>	<u>Mode</u>	<u>Geog. %<sup>1</sup></u>	<u>Mode</u>	<u>Geog. %<sup>1</sup></u>	<u>Mode</u>
EAST BAY						
(Alameda and Contra Costa Counties)	30.0	Auto BART AC	20.0	Auto BART AC	6.0	Auto BART AC
		33.0 37.0 30.0		13.0 79.0 8.0		38.0 62.0 0.0
NORTH BAY <sup>3</sup>						
(Marin and Sonoma Counties)	12.0	Auto GGTB GGTB	8.0	Auto GGTB GGTB	2.0	Auto GGTB GGTB
		58.0 35.0 7.0		70.0 20.0 10.0		70.0 30.0 0.0

<sup>1</sup>Percent of travel with origins or destinations in each geographic area.

<sup>2</sup>Percent of travel in each geographic area using listed mode of travel.

<sup>3</sup>GGTB stands for Golden Gate Transit Bus; GGTF stands for Golden Gate Transit Ferry.

SOURCE: San Francisco Department of City Planning, TJKM, Environmental Science Associates.

for proposed developments that are never constructed, or for those which would not be occupied within the time frame of the proposed project.

The employment trend approach generates a total increase in employment in downtown that has taken account of loss of employment as industries and offices move out of the City, replacement of one type of industry with another (industry shifts), as well as, replacement of existing office space with new office space. The employment trend approach makes no implicit assumptions concerning occupancy rates or actual square footage of development constructed; rather, it generates total employment increases from a standpoint which assigns jobs by metropolitan sector (area) based upon extrapolation of past trends and which considers long-term industry shifts to, within, and away from each area.

Note that neither of the two approaches has attempted to project future changes in modal split.

To illustrate the differences in projections resulting from the two approaches, Table C-2 (page \_\_\_\_ ) shows the total employment projections by the two methods (and the project's share thereof), the regional distribution of trips, and Muni's share of the new transit travel (and the project's share thereof).

As shown in the table, the employment trend approach predicts about 19% fewer employees in the downtown and about one percent less riders on the Muni than does the land-use approach. The employment trend approach would thus approximate the transit demand impacts discussed on pages \_\_\_\_\_ of the EIR.

Several considerations concerning both of the methods need to be noted. The land-use approach, as it has been applied in San Francisco EIRs, analyzes impacts for the p.m. peak hour, whereas the employment trend approach analyzes the a.m. peak. Several reasons exist as to why one peak (or the other) may be the better one to analyze.

First, the p.m. peak may be more useful to analyze, in that actual observation shows that the p.m. peak has a greater overall effect on the local street network and transit system in the downtown area than does the a.m. peak, as more travel takes place during the p.m. peak. Also, transit service is more inclined to differ from scheduled times during the p.m. peak than during the a.m. peak, as operational delays have had an 8- to 10-hour period

TABLE C-2

## COMPARISONS OF LAND-USE AND EMPLOYMENT TREND APPROACHES

<u>Approach</u>	<u>Downtown Employment Increase</u>	<u>Project<sup>1</sup> Share</u>	<u>Regional Trip Share</u>				<u>Muni<sup>2</sup> Peak-hour Increase</u>	<u>Project<sup>3</sup> Share</u>
			<u>S.F.</u>	<u>Pen.</u>	<u>E.B.</u>	<u>N.B.</u>		
Land Use	69,000	0.9%	49%	16%	24%	11%	12,750 (trips)	1.0%
Empl. Trend <sup>4</sup>	56,100	1.0%	54%	19%	21%	10%	12,900 <sup>5</sup> (trips)	0.9%

NOTE: As explained in the text, comparisons between the entries for the two approaches must be made with the understanding that the land-use approach reflects increases in employment and transit demand based solely upon increases in downtown office space, while the employment trend approach reflects total increases therein based upon historical trends. The differences among the regional trip share figures reflect these and the other differences between the two approaches.

<sup>1</sup>Employment generated by the proposed project, as a percent of the cumulative downtown employment increase.

<sup>2</sup>The Muni peak-hour increase is a demand projection (based upon existing and long-term employment trends) that is not dependent upon available or expected transit capacity.

<sup>3</sup>Muni peak-hour trips generated by the proposed project, as a percent of the cumulative downtown Muni peak-hour increase.

<sup>4</sup>These figures, represent the worst-case analysis under the employment trend approach reviewed and accepted by MTC, ABAG and Muni. Note that the land-use approach entries assume that an additional net new 17.3 million gross square feet of office space will come on line by late 1990.

<sup>5</sup>Based on 54 percent regional trip split to San Francisco (worst-case).



over which to accumulate. Finally, the on-ramps to the freeway/bridge system are greater bottlenecks (in the p.m. peak) than are the off-ramps (in the a.m. peak).

Conversely, the peaking characteristics of the a.m. peak may be more useful in that they are much sharper than those of the p.m. peak (i.e., a greater percentage of the peak-period occurs during a single hour). Also, as a result of the bridge system into San Francisco, travel inbound into the City is much easier to document, as tolls are collected on the inbound direction on the Golden Gate and Bay Bridges. Finally, a greater proportion of the travel occurring during the a.m. peak is employment-related; the p.m. peak includes shopping and pleasure trips which are not directly affected by increased office space.

The land-use approach, as it has been used in this Draft EIR, examines the p.m. peak because it has been observed to be the worst case for congestion on the City transportation system. This analysis does not reflect the spreading of the p.m. peak that is currently occurring, as all of the new trips have been assumed to take place in a single hour.

While the land-use approach assumes all new office space is fully occupied, the assumption of a functional vacancy rate of five percent is not uncommon.<sup>6</sup> With 17.3 million square feet of new office space assumed in the land-use approach to be occupied by 1990, a five percent vacancy would amount to approximately 865,000 square feet, representing 3,460 employees (at 250 square feet per employee), 700 of which would ride Muni in the p.m. peak hour. This adjustment for vacancy would thus reduce Muni peak-hour impacts in the cumulative analysis stated above by these 700 riders.

The land-use approach calculations have assumed transit capacity to be fixed at existing levels. The OER memorandum<sup>7</sup> points out, "It should be recognized that transportation is a more 'elastic' resource with many options for expansion including increasing existing capacity by using articulated vehicles, expanded car pool and van pool programs and increasing the peak commuter period through flex-time programs, among others."

If future office development does not occur along the lines of the past long-term trends as assumed in the employment trend approach, then the projections made in Working Paper I would be revised. The average annual growth during the period 1965-1980 was less than the growth per year proposed, approved, or under construction for the period 1980-1984.

The employment trend approach assumes average growth through 1990 would be at the lower historic rate, reflecting activity fluctuations from the current rate including slowdowns due to changing business conditions.

Until a forecast exists to determine how the current decade's cycle of development may differ from the past, a judgment of the applicability of results from Working Paper I may not be made. Consequently, this EIR has retained the land-use approach and presented this comparison of the employment trend approach. Both methods should be looked upon as describing potential scenarios of future conditions.

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<sup>1</sup>The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment I of the Guidelines for Environmental Impact Review, Transportation Impacts, Department of City Planning, October 1980 and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.

<sup>2</sup>Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.

<sup>3</sup>The percentage of work and non-work trips is from the Guidelines (see note 1) and from Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Report No. 62, National Cooperative Highway Research Program.

<sup>4</sup>East Bay auto occupancy is from data collected at the Bay Bridge toll plaza by the Metropolitan Transportation Commission; North Bay auto occupancy is from data collected at the Golden Gate Bridge toll plaza by the Golden Gate Bridge, Highway and Transportation District; Southern Peninsula auto occupancy is an estimate from Caltrans.

<sup>5</sup>The occupancy rate is from The Downtown Traffic and Parking Study, San Francisco Department of Public Works, 1970.

<sup>6</sup>Department of City Planning, Working Paper I, Projection of Long-range Transportation Demand, May 1982, prepared in cooperation with the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Municipal Railway (Muni). Employment trend data was compiled by ABAG from trends in County Business Pattern (U.S. Department of Commerce, Bureau of the Census, March 12, 1979), with 1979 as the base year for future projections and regional distributions. Modal split data are from the 1975 Travel Survey prepared by MTC.

<sup>7</sup>The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-

use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister Street, 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.





## APPENDIX D

### CUMULATIVE DEVELOPMENT

The list of projects shown in Table D-1, page A-94 includes all office projects in the greater downtown area and the South of Market area that are under construction or have been approved, and all projects for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission. Projects that were not definitive and/or appear to be inactive or withdrawn by the project sponsor were not included in the cumulative analyses.

Two redevelopment areas (Yerba Buena Center and Rincon Point - South Beach) and one private development (Mission Bay) are located in or near the greater downtown area. In the redevelopment areas the majority of building sites do not yet have Land Disposition Agreements (LDA) approved. Until such time as specific LDA's are approved, no estimate of travel demand can be made. (Thus, parcels for which no LDA exists have not been included in the cumulative analyses.) Development in the Yerba Buena Center (YBC) Redevelopment Area will be in accordance with the YBC Redevelopment Plan, as amended. Possible land uses that would be in accordance with the Yerba Buena Center Redevelopment Area Plan include commercial entertainment, convention facility (in place), cultural, downtown support service, exhibit/ballroom space, hotel rooms, institutional, light industry, market-rate dwelling units, subsidized dwelling units, office, park or plaza, pedestrian concourse, parking and, retail.<sup>1</sup> Possible land uses in the Rincon Point - South Beach Redevelopment Area include hotel, housing, office, open space, public parking, retail and, warehouse uses.<sup>2</sup> Mission Bay has not been included in the cumulative analyses as no application has been submitted to the City and it is uncertain what formal proposal may be made.

Existing office and retail space that would be replaced by new buildings was subtracted from the proposed new construction to better approximate the impacts the new buildings would have on transportation facilities. As shown in Table D-2, net new office and retail space is less than total new construction as a result of subtracting out existing office and retail space on sites proposed for new buildings. ("Net new" space is used to refer to the amount of new construction in excess of existing space on each site in terms of gross square feet of floor space. It does not refer to net leasable or net rentable floor space.)

**APPENDIX D  
CUMULATIVE DEVELOPMENT**

TABLE D-1

DOWNTOWN OFFICE PROJECTS UNDER FORMAL REVIEW, APPROVED  
OR UNDER CONSTRUCTION AS OF JANUARY 27, 1983

**PROJECTS UNDER FORMAL REVIEW**

Assessor's Block	Case No.	Project Name	Office Gross Sq. Ft.		Retail Gross Sq. Ft.	
			Total New Construction	Net New Construction	Total New Construction	Net New Construction
110	82.129E	Embarcadero Terraces	142,000	142,000	3,000	3,000
112	81.258	Ice House Conversion (C)	209,000	209,000	---	---
113	82.418E	1171 Sansome	30,000	30,000	---	---
136	81.245	955 Front at Green	50,000	50,000	---	---
176	81.673	Columbus/Pacific Savoy	49,000	49,000	22,000	22,000
176	82.368ED	900 Kearny	25,000	25,000	5,000	5,000
228	81.610ED	569 Sacramento (C)	19,000	19,000	---	---
269	81.132ED	Russ Tower Addition	392,900	392,900	13,000	13,000
288	81.687ED	222 Kearny/Sutter	269,400	202,400	10,000	-8,400
331	81.448E	Mixed Use Development	218,600	207,600	44,700	19,700
669	81.667ED	1361 Bush (C)	45,720	45,720	---	---
716	81.581ED	Polk/O'Farrell	61,600	61,600	22,400	22,400
814	81.540E	101 Hayes	126,000	126,000	6,000	6,000
816	82.212E	330-350 Gough (C)	16,000	16,000	---	---
834	82.603E	25 Van Ness (Masonic Temple)	42,000	42,000	---	---
3702	81.549ED	1145 Market	137,500	108,500	8,000	8,000
3707	81.245C	New Montgomery Place	231,500	217,400	2,200	-3,900
3708	81.493ED	71 Stevenson at Ecker	324,600	324,600	6,200	6,200
3717	81.183E	123 Mission	342,800	342,800	---	---
3733	82.29E	832 Folsom	50,000	50,000	---	---
3750	82.241E	600 Harrison	228,000	228,000	10,000	10,000
3750	82.77E	642 Harrison (C)	54,400	45,900	---	---
3760	81.386	401 6th	7,000	7,000	---	---
3763	82.384EV	400 2nd Street at Harrison (C)	71,500	49,500	---	---
3778	81.630ED	548 5th/Brannan	250,000	250,000	---	---
3786	82.33E	655 5th/Townsend	126,250	126,250	---	---
3788	82.352EV	640 2nd Street	39,100	37,400	---	---
3789	82.31EV	615 2nd/Brannan (C)	106,000	106,000	---	---
9900	81.63	Ferry Building Rehab	308,000	96,000	150,000	124,000
<b>TOTAL PROJECTS UNDER FORMAL REVIEW</b>			<b>3,972,870</b>	<b>3,607,570</b>	<b>302,500</b>	<b>227,000</b>

(C) = Conversion



TABLE D-1  
(continued)

APPROVED PROJECTS

Assessor's Block	Case No.	Project Name	Office Gross Sq. Ft.		Retail Gross Sq. Ft.	
			Total New Construction	Net New Construction	Total New Construction	Net New Construction
58	82.234ED	Roundhouse	45,000	45,000	3,000	3,000
141		100 Broadway	13,000	13,000	---	---
143		1000 Montgomery (C)	39,000	39,000	---	---
161	80.191	Mirawa Center	36,000	36,000	30,650	30,650
164	81.631D	847 Sansome	23,750	23,750	---	---
164	81.573D	50 Osgood Place	22,500	22,500	9,100	9,100
166	80.15	750 Battery	105,400	105,400	12,800	12,800
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500
261	81.249ECQ	333 California	640,000	466,500	15,500	15,500
262	81.206D	130 Battery	41,000	41,000	---	---
265	81.195ED	388 Market at Pine	234,500	85,500	10,000	-8,500
267	81.241D	160 Sansome	2,200	2,200	---	---
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200
271		582 Bush	18,900	18,900	---	---
288	81.461ED	333 Bush (Campeau)	498,400	458,100	20,900	20,900
294	82.870	44 Campton Place	7,600	7,600	---	---
311	82.120D	S. F. Federal	246,800	218,850	1,600	-9,440
834		25 Van Ness (C)	101,600	101,600	36,400	36,400
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000
3518	81.483V	291 10th Street	25,700	25,700	---	-25,700
3705	80.315	Pacific III Apparel Mart	332,400	332,400	---	---
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400
3715	82.16EC	121 Steuart	33,200	33,200	---	---
3722	81.417ED	144 Second at Minna	30,000	30,000	---	---
3724	81.102E	Holland Ct. (C)	27,850	27,850	---	---
3729	82.860	774 Tehama	5,800	5,800	---	---
3732	81.548DE	466 Clementina (C)	15,150	15,150	---	---
3733	81.2	868 Folsom	65,000	65,000	---	---
3735	80.106	95 Hawthorne (C)	61,900	61,900	---	---
3738	DR80.5	315 Howard	294,000	294,000	3,200	3,200
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200
3749	81.18	Marathon - 2nd & Folsom	681,700	681,700	39,300	39,300
3752	77.220	Office Bldg. (YBC SB-1)	11,000	11,000	---	---
3763	81.287V	490 2nd/Bryant (C)	40,000	40,000	---	---
3763	81.381	480 2nd/Stillman (C)	35,000	35,000	---	---
3775	81.147V	338-340 Brannan (C)	36,000	36,000	---	---
3776	81.693EV	539 Bryant/Zoe	63,000	63,000	---	---
3776	81.59	Welsh Commons	55,600	55,600	12,000	12,000
3787	81.306	252 Townsend at Lusk	81,900	81,900	---	---
3788	81.296Z	690 2nd/Townsend (C)	16,600	16,600	16,000	16,000
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000	---	---
3794	81.569EV	123 Townsend	104,000	49,500	---	---
3794		155 Townsend	19,000	19,000	---	---
3803	81.244D	China Basin Expansion	196,000	196,000	---	---
TOTAL APPROVED PROJECTS			5,861,750	5,090,200	264,700	203,860

TABLE D-1  
(continued)

## PROJECTS UNDER CONSTRUCTION

Assessor's Block	Case No.	Project Name	Office Gross Sq. Ft.		Retail Gross Sq. Ft.	
			Total Construction	Net New Construction	Total Construction	Net New Construction
106	81.415ED	1299 Sansome	41,000	41,000	3,500	3,500
163	81.1	901 Montgomery	63,000	63,000	18,800	18,800
164	81.251D	936 Montgomery	21,500	11,500	---	---
166	CU81.7	222 Pacific/Front (C)	142,000	142,000	---	---
167		Golden Gateway III	103,000	103,000	---	---
196		736 Montgomery	40,000	40,000	---	---
196	CU79.49	Pacific Lumber Co.	92,000	92,000	---	---
206	81.165D	401 Washington at Battery	13,200	13,200	1,800	1,800
208	81.104EDC	Washington/Montgomery	235,000	233,300	4,000	-1,200
227	80.296	Bank of Canton	230,500	177,500	---	-800
237	DR80.6	353 Sacramento (Daon)	277,000	251,000	8,300	-2,000
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	DR80.16	550 Kearny	71,400	71,400	---	---
263	CU79.12	101 California	1,265,000	1,257,000	24,700	-14,300
271	81.517	453 Grant	27,500	27,500	6,200	6,200
287	81.550D	Sloane Building (C)	125,300	125,300	30,000	30,000
288	DR80.24	101 Montgomery	264,000	234,000	5,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
292	DR79.13	Crocker National Bank	676,000	495,000	86,000	54,000
312	79.370	50 Grant	90,000	90,000	---	---
351	DR79.24	Mardikian/1170 Market	92,050	92,050	---	---
351	79.133	U.N. Plaza	40,000	40,000	---	---
672		Sutter/Franklin (Wealth Investment)	104,500	104,500	---	---
738		One Flynn Center	25,000	25,000	---	---
762		Opera Plaza	50,000	50,000	---	---
3702	81.25	1155 Market/8th	138,700	138,700	8,800	8,800
3708	80.34	25 Jessie/Ecker Square	111,000	111,000	---	---
3709	80.36	Five Fremont Center	791,200	722,200	35,000	17,300
3712	79.11	Federal Reserve Bank	640,000	640,000	---	---
3715		141 Stuart	80,000	80,000	---	---
3717	79.236	101 Mission at Spear	219,350	219,350	---	---
3717		150 Spear	330,000	330,000	---	---
3717	80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3718	79.12	Pacific Gateway	540,000	540,000	7,500	7,500
3724		Yerba Buena West	335,000	335,000	---	---
3735		Convention Plaza	339,000	339,000	---	---
3735		Planter's Hotel (C)	20,000	20,000	---	---
TOTAL PROJECTS UNDER CONSTRUCTION			8,935,750	8,557,050	283,350	158,350

(C) = Conversion

## APPENDIX D

(continued)

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<sup>1</sup>Land uses from Draft Second Supplement Yerba Buena Center Final Environmental Impact Report, San Francisco Department of City Planning, May 28, 1982.

<sup>2</sup>Land uses from Rincon Point - South Beach Redevelopment Area, San Francisco, California, Final Environmental Impact Report/ Environmental Impact Statement, San Francisco Department of City Planning, certified November 5, 1980.

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TABLE D-2

GROSS SQUARE FEET OF CUMULATIVE OFFICE AND RETAIL  
DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF JANUARY 27, 1982

<u>Status of Project</u>	<u>Office (Gross Sq. Ft.)</u>		<u>Retail (Gross Sq. Ft.)</u>	
	<u>Total New Construction</u>	<u>Net New Construction</u>	<u>Total New Construction</u>	<u>Net New Construction</u>
Under Formal Review	3,972,870	3,607,570	302,500	227,000
Approved	5,861,750	5,090,200	264,700	203,860
Under Construction	<u>8,935,750</u>	<u>8,557,050</u>	<u>283,350</u>	<u>158,350</u>
GRAND TOTALS	18,770,370	17,254,820	850,550	589,210

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TABLE D-3  
MAJOR OFFICE BUILDING CONSTRUCTION  
IN SAN FRANCISCO (IN GROSS SQUARE FEET)

<u>Year</u>	<u>Total Gross Square Feet Completed</u>	<u>5-Year Total</u>	<u>5-Year Annual Average</u>	<u>Cumulative Total of Office Buildings<sup>2</sup></u>	<u>Cumulative Total of All Downtown Office Buildings<sup>3</sup></u>
Pre-1960				28,145,000	24,175,000
1960	1,183,000				
1961	270,000				
1962	-				
1963	-				
1964	1,413,000				
1960-1964		2,866,000 (2,580,000)†	573,200 (516,000)†	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
1965-1969		8,379,000 (7,541,000)†	1,675,800 (1,508,000)†	38,266,000	34,295,000
1970	1,853,000				
1971	-				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
1970-1974		8,615,000 (7,753,000)†	1,723,000 (1,550,000)†	46,019,000	42,048,000

(continued)

TABLE D-3  
MAJOR OFFICE BUILDING CONSTRUCTION  
IN SAN FRANCISCO (IN GROSS SQUARE FEET)  
(continued)

<u>Year</u>	<u>Total Gross Square Feet Completed</u>	<u>5-Year Total</u>	<u>5-Year Annual Average</u>	<u>Cumulative Total of All Office Buildings<sup>2</sup></u>	<u>Cumulative Total of All Downtown Office Buildings<sup>3</sup></u>
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	-				
1979	2,532,000				
1975-1979		8,157,000 (7,341,000) <sup>1</sup>	1,631,400 (1,468,000) <sup>1</sup>	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
1982	3,771,000				
1980-1982		8,084,000 <sup>4</sup> (7,275,600) <sup>1</sup>	2,694,700 <sup>4</sup> (2,425,200) <sup>1</sup>	60,635,600	56,559,600

<sup>1</sup>Total net square feet (90% of gross). Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building

<sup>2</sup>Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table I, Part I. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.

<sup>3</sup>Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.

<sup>4</sup>Three-year total and average.

SOURCE: Department of City Planning, March 15, 1983





## APPENDIX E

## AIR QUALITY

## SAN FRANCISCO AIR POLLUTANT SUMMARY 1979-1981

<u>POLLUTANT</u>	<u>FEDERAL STANDARD<sup>2</sup></u>	<u>STATE STANDARD<sup>3</sup></u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<u>Carbon Monoxide (CO)</u>					
1-hour average (ppm)	35	20			
Highest hourly average No. of exceedances			20 0	10 0	8 0
8-hour average (ppm)	9	None			
Highest 8-hour average No. of exceedances			13.8 1	7.5 0	5.3 0
<u>Ozone (O<sub>3</sub>)</u>					
1-hour average (ppm)	.124	.10			
Highest hourly average No. of exceedances			0.08 0	0.09 0	0.07 0
<u>Nitrogen Dioxide (NO<sub>2</sub>)</u>					
1-hour average (ppm)	None	.25			
Highest hourly average No. of exceedances			0.16 4	0.17 0	0.11 0
<u>Sulphur Dioxide (SO<sub>2</sub>)</u>					
24-hour average (ppm)	None	.05			
Highest 24-hour average No. of exceedances			0.034 0	0.018 0	0.016 0
<u>Total Suspended Particulate (TSP)</u>					
24-hour average (ug/m <sup>3</sup> )	None	100			
Highest 24-hour average No. of exceedances			117 1	173 6	103 1

# APPENDIX E (continued)

## AIR QUALITY

### SAN FRANCISCO AIR POLLUTANT SUMMARY 1979-1981<sup>1</sup>

<u>POLLUTANT</u>	<u>FEDERAL STANDARD<sup>2</sup></u>	<u>STATE STANDARD<sup>3</sup></u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Annual Geometric Mean (ug/m <sup>3</sup> ) <sup>5</sup>	None	60	42.0 No	52.1 No	56.0 No
Annual Geometric Mean					
Annual Exceedances					
<u>Lead</u>					
3-month Average (mg/m <sup>3</sup> )	None	1.5	0.95 0	0.53 0	0.35 0
Highest 3-month average					
No. of exceedances					

<sup>1</sup> 1979 data collected at 939 Ellis Street. 1980-81 data collected at 900 23rd Street.

<sup>2</sup> Federal standard is not to be exceeded more than once per year. Annual average standards are not be exceeded.

<sup>3</sup> State standards are not to be equalled or exceeded. The State 1-hour average CO standard was reduced from 40 ppm to 20 ppm in 1982.

<sup>4</sup> The federal standard is given in terms of Expected Annual Excesses which is based on a 3-year running average.

<sup>5</sup> The annual Geometric Mean is a single number which applies to an entire year of data. "No" indicates TSP concentrations did not exceed 60 (ug/m<sup>3</sup>).

Note: ppm = parts per million  
ug/mg<sup>3</sup> = micrograms per cubic meter  
mg/m<sup>3</sup> = milligrams per cubic meter

Source: BAAMQD, Air Pollution in the Bay Area by Station and Contaminant; and California Air Resources Board, California Air Quality Data.





